Chronic Illness: the hidden causes

Diagnosis and Treatment at a Causal Level

London, November 2015

Dietrich Klinghardt MD, PhD

Understanding chronic illness and why it's on the rise

Chronic illness has 3 components

1. **Genetic and epigenetic setup** determines the ability of an individual to adapt to an ever-changing environment. Our individual physiology, proteome and metabolome are the result
2. **Environmental challenges**: food, air and water availability and quality, toxins in food, water and air, invading and competing microbes and parasites
3. **The immune response** of the individual to toxins and microbes/parasites

Treating Chronic Illness: the 4 principles

1. Correcting and balancing the **basic physiology**: exercise, diet, trauma work and transgenerational physiology, pH, hormones, vitamins, osteopathic work, EMR protection, etc.
2. **Decreasing toxic body burden** by removing metals, chemicals and biotoxins from the extra- and intracellular matrix. EMR protection
3. **Immune modulation**: upregulating blocked or underactive immune functions and downregulating hyperactive ones ("The response of the host makes the disease" Lewis Thomas MD; NEJM 1972;287:553-555)
4. **Decreasing microbial burden**: diagnosing and treating parasites, mould, viruses
   (HSV- 1, EBV, etc.), bacteria (e.g., Borrelia, Bartonella), protozoae (Babesia, toxoplasma,
   amoebas)

1. **Toxicity (metals and chemicals):** lifelong detox protocols
2. **Unresolved psychoemotional and transgenerational issues :** Psychotherapy **Methylation** block: caused by early psychoemotional trauma, intrauterine events or transgenerational (traumata of parents or grandparents) - B12, folate, Zn, B6, Mg. Psychological Trauma tx
3. **EMR**: exposure to microwave, electric and magnetic fields: shield!
4. **Infections** (viral, bacterial, protozoal, mould and fungal), **infestations** (parasites) **and biotoxins:** antimicrobial protocols
5. **PANDAS and PANS** (Chronic tonsillitis and sinusitis, MARCoNS): ozone injections, cryotherapy (www.kryoPraxis.de), neural therapy, Neti Pot, Bravo Yoghurt
6. **HPU**: Hemo-Pyrrol Lactam Uria (most often caused by stressful childhood events, accidents in early years or transgenerational): Core, trauma tx
7. **CCSVI**: stenoses of the anterior neck veins: balloon dilatation, manual tx, Lyme cocktail, procaine injections
8. **Dental issues**: a. toxicity from root-filled teeth, amalgam fillings or cavitations; b. electro-galvanism and microwave antenna function of dental metal restorations, allergy/toxicity from dental materials
9. Desynchronized **brain waves**: CES from www.littleTreeGroup.com,
10. Decreased **"regulatory neuropeptides" and hormonal deficiencies**: MSH, OXT,

Illness and Epigenetics:

What is not healed in the past may come to haunt you – and your children: The epigenetic consequences of wars, starvation, poverty, struggle, of polluting and radiating the body, and other traumata in the family biography

- Any psychological or physical trauma, exposure to electromagnetic radiation or toxins (herbicides, wood preservatives, heavy and light metals, preservatives) can cause epimutations (epigenetic changes) that are passed on vertically to the offspring. Epigenetic changes cause faulty gene expression in the future.
- In animal models epimutations were followed for 7 generations and generally led to the studied family line dying out.
- We are now in the third generation of humans being exposed to microwave, glyphosate and other toxic insults that have never existed in human history before
- We are only one or two generations away from a war that was by far the most traumatic ever

Trauma blocks the correct transscription of DNA for generations

a. Trauma in infancy

1. Isabelle Mansuy (Universität Zürich) subjected rat babies to stress for the first 2 weeks after their birth. The animals developed depression and anxiety disorders later in life. These offspring were then treated with love and caring, and so was their offspring. However, the next 3 generations – as far as the study went – developed the same disorders. Mansuy was able to show that these changes were passed on epigenetically, not in the genes . Important genes of the fathers were incorrectly methylated, also several genes tracked in the egg and spermcells of the offspring

2. Prof. Eric Richards (Univ. of Washington. St. Louis) was able to show that the way rat babies were treated by their mothers and carers determined whether and how a certain receptor on the hippocampus is methylated. Positive experiences permanently activate this receptor, a single negative experience was enough to permanently disable the receptor. This setting was passed on to the following generations

3. A recent study in Holland on women who gave birth to children in the time just after WW II (hunger, poverty, illness) revealed that their daughters had twice the rate of schizophrenia as the control group. The researchers were also able to show that changes in the epigenetic controls of several genes responsible for development and growth were responsible

b. Intrauterine trauma: causes chronic illness in adulthood, and also in the lives of the children of those adults, their grandchildren and beyond

1. Eva Jablonka and Gal Raz (Univ Tel Aviv) demonstrated that **chemical toxins** affecting aspects of the hormonal system responsible for reproduction lead to permanent changes in the reproductive system and to **decreased fertility. *These changes are passed on epigenetically to their offspring, generation after generation***, until this family line dies out

2. "Annual Research Review: *Prenatal stress and the origins of psychopathology: an evolutionary perspective".* J Child Psychol Psychiatry. 2011 Apr;52(4):356-67. Glover V. ***Emotional stress in the womb leads to epigenetic changes and psychiatric illnesses in adulthood***

3. "*Epigenetics and prenatal influences on asthma and allergic airways disease*". Chest. 2011 Mar;139(3):640-7. Martino D, Prescott S.: **emotional stress, smoking, alcohol, environmental toxins and infections of the pregnant mother** are responsible for the epigenetic **changes of the methylation cycle**, leading to **asthma**

4. “Effects of prenatal **infection** (and/or inflammation) on brain development and behavior: A review of findings from animal models”. Brain Behav. Immun. (2010), Boksa, P. *“**Infection in the womb is common and leads to permanent neuro-developmental changes,** mediated via methylation cycle abnormalities”*

5. “Prenatal glucocorticoid overexposure causes permanent increases in renal erythropoietin expression and red blood cell mass in the rat offspring”. Endocrinology. 2011 Jul;152(7):2716-21 Tang JI, Seckl JR, Nyirenda MJ. : “***Stress in the womb changes and resets the coagulation system and many angiological parameters, setting the stage for stroke, heart attack, and chronic infections in adulthood”***

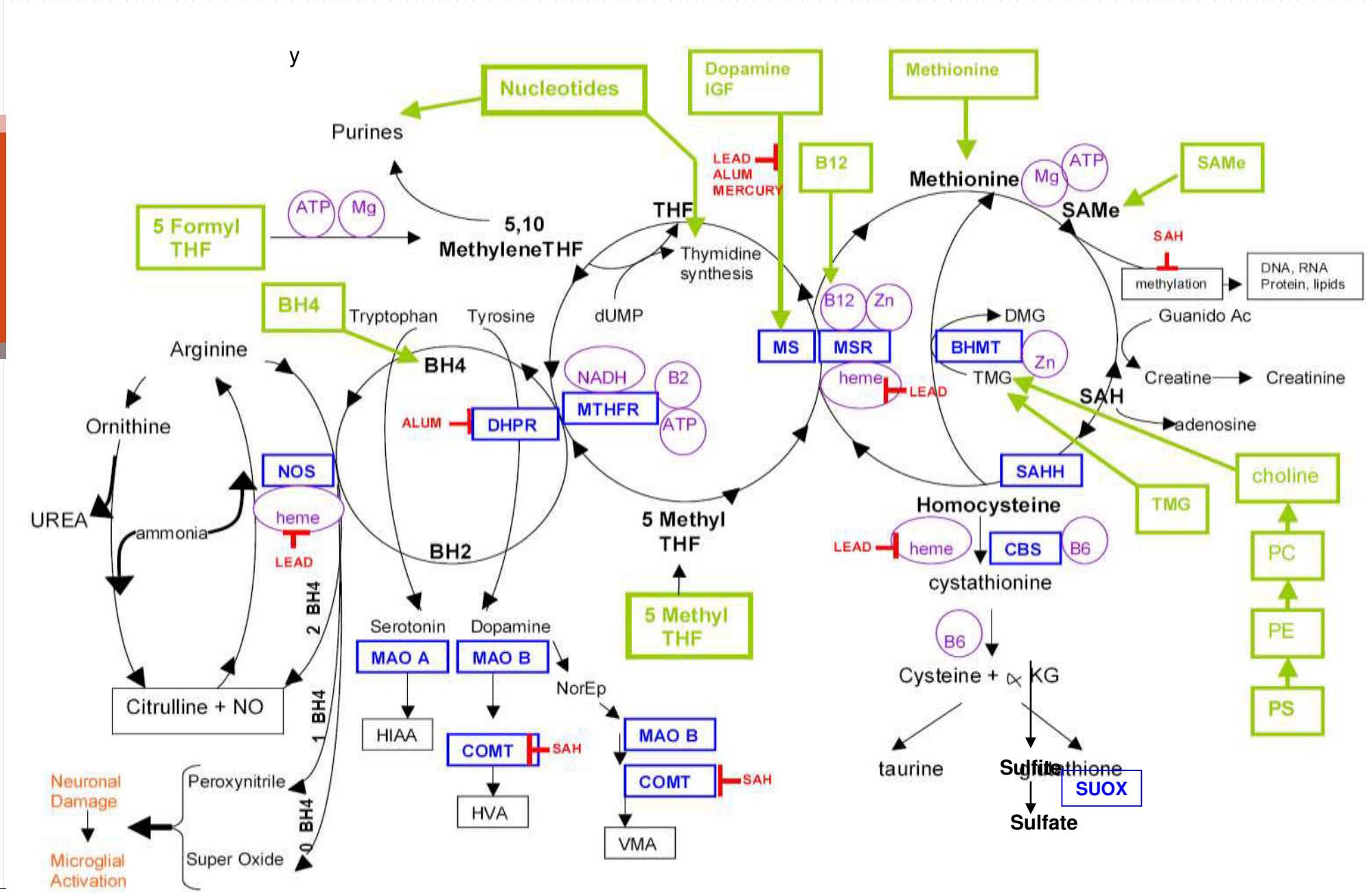
6. *Boksa, P. “Effects of **prenatal infection** (*and/or inflammation) on **brain development and behavior**: A review of findings from animal models”._Brain Behav. Immun. (2010)*

*7. Thompson JA, Regnault TR.: “In utero origins of adult **insulin resistance and vascular dysfunction**”. Semin Reprod Med. 2011 May;29(3):211-24. Epub 2011 Jun 27*

*8. **Fetal Origins of Heart Disease**,* D J P Barker ; BMJ 311: 171 (Published 15 July 1995):

The Barker Hypothesis

Pathways With Enzymes, Cofactors, Supplements & Blocking Metals/SAH modified from Amy Yasko PhD



Entropy **2012**, *14*(**10**), 1953-1977; doi:10.3390/e14101953
Review

Impaired Sulfate Metabolism and Epigenetics: Is There a Link in Autism?

Samantha Hartzell and Stephanie Seneff *

Abstract

Autism is a brain disorder involving social, memory, and learning deficits, that normally develops prenatally or early in childhood. Frustratingly, many research dollars have as yet failed to identify the cause of autism. While twin concordance studies indicate a strong genetic component, the **alarming rise in the incidence of autism in the last three decades suggests that environmental factors play a key role** as well. This dichotomy can be easily explained if we invoke **a heritable epigenetic effect as the primary factor**. Researchers are just beginning to realize the huge significance of epigenetic effects taking place during gestation in influencing the phenotypical expression. Here, we propose the novel hypothesis that sulfate deficiency in both the mother and the child, brought on mainly by excess exposure to environmental toxins and inadequate sunlight exposure to the skin, **leads to widespread hypomethylation in the fetal brain with devastating consequences.** We show that many seemingly disparate observations regarding serum markers, neuronal pathologies, and nutritional deficiencies associated with autism can be integrated to support our hypothesis.

Keywords: autism; epigenetics; cholesterol sulfate; DNA methylation; sulfotransferases; heparan sulfate; folate; cobalamin; zinc

Family systems oriented transpersonal psychotherapy

Many aspects of the vertical transmission of ancestral trauma and unresolved conflicts can be erased with this approach. I offer evening and weekend workshops to my patients and also individual healing work utilizing the genogram and background information from living family members, public records and internet-based resources (www.sophiaHI.com, www.KlinghardtInstitute.com). This work can dramatically improve treatment outcomes in the ASD community. It is very effective psychotherapeutic work that can be done for ASD children. They do not need to be present. The parents have to do the work.

- *"Wirksamkeit von Systemaufstellungen: explorative Ergebnisse der Heidelberger RCT Studie"*. Familiendynamik;1, 42-53, 2013, J.Weingold et al
- *Handbuch der Mentalfeld-Techniken*, VAK 2009, D.Klinghardt, A.Maurer)

In psychotherapy memories must be reactivated to have their neuronal connections altered, so they can be transcribed and changed. *"Fear memories require protein synthesis in the amygdala for reconsolidation after retrieval"*. Nature, 406 (6797): 722-26; 2002; J.Debiej et al

- *"Toward a Neurobiology of Pychotherapy: Basic science and clinical applications"*

  J of Neuropsychiatry and Clinical Neurosciences, 17: 145-58, 2005. Kandel et al

Epigenetic vertical transmission of trouble

Diagnosis and energetic treatment:

- Genogram development with healing interventions
- Bert Hellinger's family constellation work
- D. Klinghardt Psychokinesiology and Mental Field Therapy

Physical/biochemical treatment:

- 1. Quinton water
- 2. Methylation factors given orally or with photopheresis (5-MTHF, B12, glycine, etc.)

Methylation issues can be treated with vitamins, modulated light
and psychological intervention

Methylation factors to test (and treat with):

Core: Mn, Zn, Mag, Taurine, B6, P5P, Molybdenum

Hydroxy-or Methyl B12, Folinic acid, Methylfolate, SAMe

To improve Sulfation: MSM

TriMethylGlycine (TMG)

Creatine, Choline (Liposorb), BH4

Vit B1, B2, B3

To detox: aluminum, mercury, lead, glyphosate

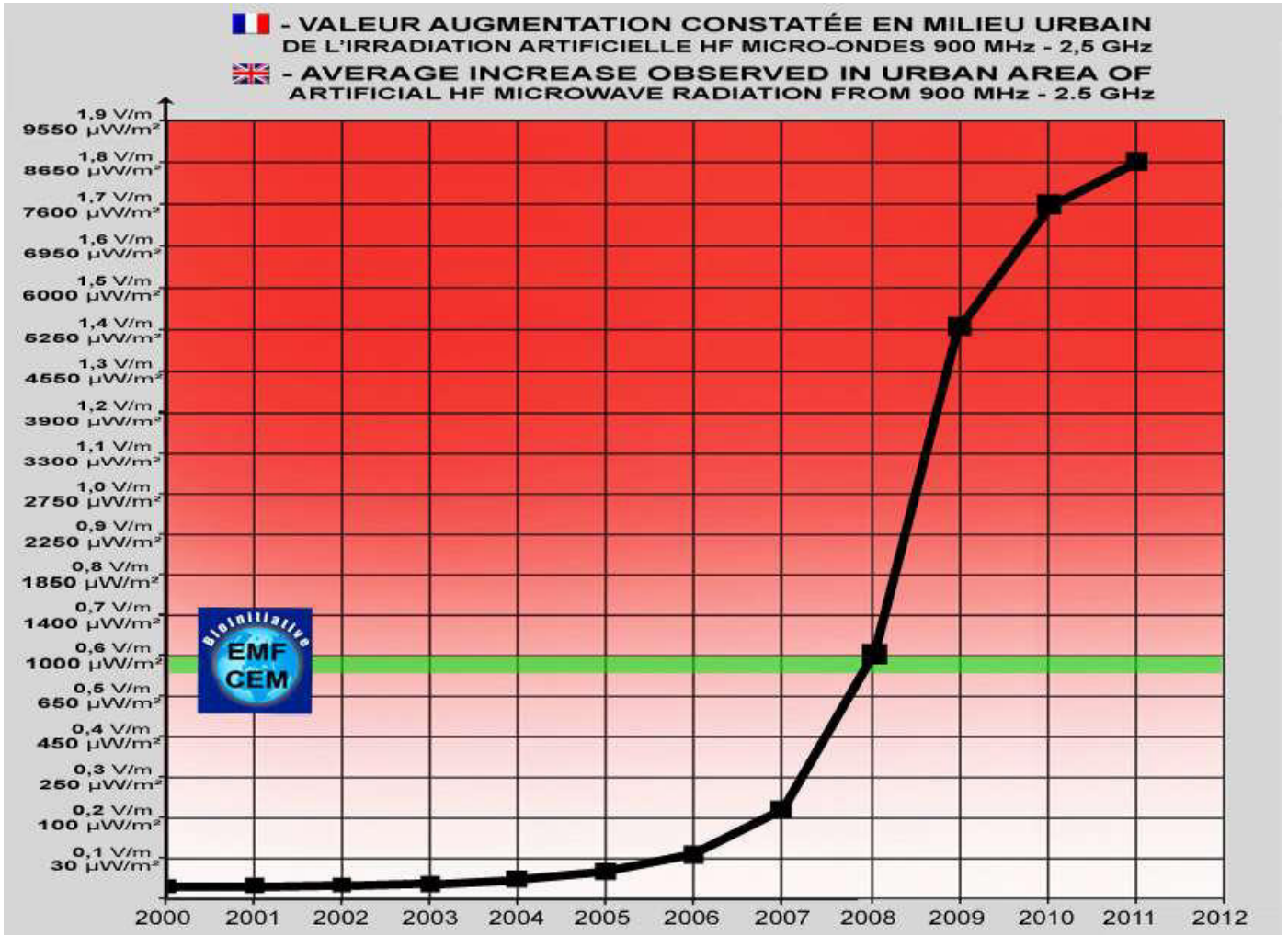
Electrosmog and its destructive effect on the brain, our genome, epigenome, proteome and microbiome

Electrosmog refers to our exposure to the sum total of all man-made electric fields, magnetic fields, radiowaves, TV broadcasting, home lighting and all other sources of radiation

Unexposed **Exposed**

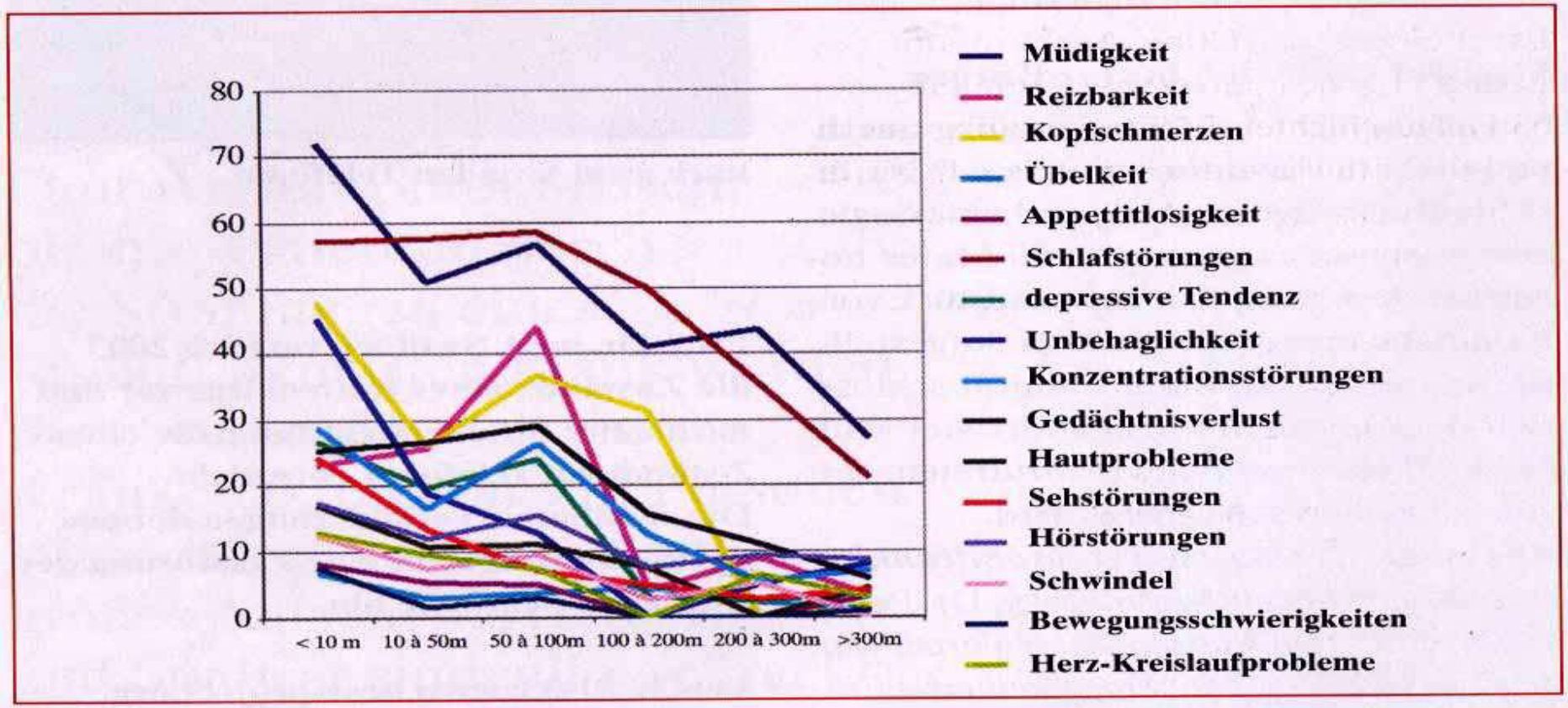
Same type of watercress grown grown inside a classroom with the same sun exposure – only the right one placed near the wireless router

Growth in Exposure to Microwave Radiation 2000 - 2010



Next-Up Organisation

EMR - Electrosmog



Dr. R. Santini untersuchte 1999 den Zusammenhang zwischen dem Auftreten bestimmter Krankheiten und der Nähe zu Mobilfunk-Basisstationen in Frankreich. Anhand einer Befragung von 530 Personen kam er zu dem Ergebnis, dass sich innerhalb einer 300 m Zone folgende Symptome häufen: Müdigkeit, Schlafstörungen, Reizbarkeit, Kopfschmerzen, Gedächtnisverlust, Konzentrationschwierigkeiten etc.

www.funkenflug.de

"Brain proteome response following whole body exposure of mice to mobile phone or wireless DECT base radiation"

Electromagnetic Biology and Medicine; Posted online on January 20, 2012.
(doi:10.3109/15368378.2011.631068 (1–25) Adamantia F. Fragopoulou, Athina Samara, Marianna H. Antonelou, Anta Xanthopoulou, Aggeliki Papadopoulou, Konstantinos Vougas, Eugenia Koutsogiannopoulou, Ema Anastasiadou, Dimitrios J. Stravopodis, George Th. Tsangaris, Lukas H. Margaritis Department of Cell Biology and Biophysics, Athens University

Abstract:

The objective of this study was to investigate the effects of two sources of electromagnetic fields (EMFs) on the proteome of cerebellum, hippocampus, and frontal lobe in Balb/c mice following long-term whole body irradiation. Three equally divided groups of animals (6 animals/group) were used; the **first** group was exposed to a **typical mobile phone**, at a SAR level range of 0.17–0.37 W/kg for 3 h daily for 8 months, the **second** group was exposed to a **wireless DECT base** (Digital Enhanced Cordless Telecommunications/Telephone) at a SAR level range of 0.012–0.028 W/kg for 8 h/day also for 8 months and the t**hird** group comprised the **sham**-exposed animals. Comparative proteomics analysis revealed that long-term irradiation from **both EMF sources** altered significantly ($p < 0.05$) the **expression of 143 proteins** in total (as low as 0.003 fold downregulation **up to 114 fold overexpression**). Several neural function related proteins (i.e., Glial Fibrillary Acidic Protein (GFAP), Alpha synuclein, Glia Maturation Factor beta (GMF), and apolipoprotein E (apoE)), heat shock proteins, and cytoskeletal proteins (i.e., Neurofilaments and tropomodulin) are included in this list as well as proteins of the brain metabolism (i.e., Aspartate aminotransferase, Glutamate dehydrogenase) to nearly all brain regions studied. Western blot analysis on selected proteins confirmed the proteomics data. The observed **protein expression changes may be related** to **brain plasticity** alterations, indicative of **oxidative stress in the nervous system** or involved in **apoptosis** and might potentially explain human health hazards reported so far, such as **headaches, sleep disturbance, fatigue, memory deficits, and brain tumor long-term induction** under similar exposure conditions.

Wireless Radiation in the Etiology and Treatment of Autism: Clinical Observations and Mechanisms

J. Aust. Coll. Nutr. & Env. Med. Vol. 26 No.2 (August 2007) pages 3-7

Tamara J Mariea and George L Carlo

- **Results**

The sentinel subject's history suggested that the **efficiency of heavy metal detoxification was dramatically increased when EMR was eliminated**. For the larger groups, data indicated that heavy metals were cleared in a time and molecular weight-dependent manner after EMR was eliminated from the treatment environment.

- **Conclusions**

The findings suggest a significant **role of EMR in both the etiology of Autism and the efficacy of therapeutic interventions.** The mechanism of EMR impact could be direct by facilitating early clinical onset of symptoms or indirect, including **trapping heavy metals in cells** and both accelerating the onset of symptoms caused by heavy metal toxicity as well as impeding therapeutic clearance. These data also suggest that wireless device EMR is a synergen in the etiology of Autism, acting in conjunction with environmental and genetic factors, and offer a mechanistic explanation for the correlation between concurrent increases in the incidence of Autism and the use of wireless technology.

Extremely-Low Frequency (ELF) and Radiofrequency (RF) Electromagnetic Fields Have Very Similar Biological Effects

- Genetic Effects
- Cancer
- Cellular/Molecular Effects
- Electrophysiology
- Behavior
- Nervous System
- Blood-brain barrier
- Calcium
- Cardiovascular
- Warm sensation
- Hormones
- Immunology
- Metabolic rate/effects
- Reproduction/ growth
- Subjective symptoms
- Stress

Source: Dr. Henry Lai, Research Professor, Department of Bioengineering, University of Washington. Presentation March 21, 2008 at Council on Wireless Technology Impacts EMF Panel, San Francisco, CA.

Diagnosis of EMR exposure and sensitivity

- Measuring body voltage (regular voltage meter is enough): patient sits or lies in location to be tested. Holds one electrode. The other is plugged into the earth at th nearest outlet. Should be under 50 mV
- Measuring incoming radiowaves (GigaHertzSolutions.com – 35C)
- The reading should be under 1 millWatt per square meter in the sleeping location
- Physiology: measuring the biological effect in the location with either ART, EDS, HRV or EEG
- Biochemistry: 24 hr urine melatonin level

Radioprotection

1. Daytime:

- No wireless in home, no chordless phones
- Child should wear radio protective clothing (BioPure.eu)
- **Rosemary tincture**: "*highly significant protective anti-mutagenic activity". "Even the most powerful water-soluble antioxidants lack the capacity to protect against gamma ray induced damage". (***British Journal of Radiology**, February 2 edition, 2015)
- Using the **Stetzer filters** throughout home or school to decrease "dirty electricity"

2. Evening:

- **Liposomal Melatonin** (+ 50-100 mg DMSA for a few weeks)
- Trial with 5 HTP (adult dose: 200 mg)
- **Propolis tincture** 4-6 pipettes after dinner. A propolis compound (CAPE) protects lymphocytes against radiation (2008 **Journal of Biochemical and Molecular Toxicology)**
- TD-Magnesium, **Epsom salt baths** twice daily, oral Mag.glycinate. Magnesium act as calcium channel blocker. Voltage gate calcium channels are upregulated by EMR (M.Pall, 2013)

3. Nights:

- Sleep sanctuary, fuses off
- Consider Samina bed

Treatment of electrosmog in a "sick" sleeping location: the Faraday canopy

Toxicity

- To become toxic requires 2 things: exposure and individual susceptibility
- Umbilical chord studies on newborn babies show that we are born toxic. Studies on adults show that we live in a broth of toxicity
- It is estimated that 82,000 chemicals are in our environment. All of them can be found in our body
- Most published in the past is our exposure – and the consequences – to xenoestrogens (parabens, phthalates, bisphenol A, PBDEs and more. Read: “Our Stolen Future”)
- Recently leading MIT researcher Stephanie Seneff PhD has focused on glyphosate (principal ingredient of Roundup) as major cause of chronic illness.

Journal of Organic Systems, 9(2), 2014

Genetically engineered crops, glyphosate and the deterioration of health in the United States of America

Nancy L. Swanson, Andre Leu, Jon Abrahamson and Bradley Wallet
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International Federation of Organic Agricultural Movements, Bonn, Germany
Abacus Enterprises, Lummi Island, WA, USA
Crustal Imaging Facility, Conoco Phillips School of Geology and Geophysics, University of Oklahoma, USA * Corresponding author: andreleu.al@gmail.com

URL for the full paper:
http://www.organic-systems.org/journal/92/JOS_Volume-9_Number-2_Nov_2014-Swanson-et-al.pdf

Abstract

A huge increase in the incidence and prevalence of chronic diseases has been reported in the United States (US) over the last 20 years. Similar increases have been seen globally. The herbicide glyphosate was introduced in 1974 and its use is accelerating with the advent of herbicide-tolerant genetically engineered (GE) crops. Evidence is mounting that glyphosate interferes with many metabolic processes in plants and animals and glyphosate residues have been detected in both. **Glyphosate disrupts the endocrine system and the balance of gut bacteria**, it **damages DNA** and is a driver of mutations that **lead to cancer**. In the present study, US government databases were searched for GE crop data, glyphosate application data and disease epidemiological data. Correlation analyses were then performed on a total of 22 diseases in these time-series data sets.

Glyphosate is the primary ingredient of Monsanto's "Roundup"

Journal of Organic Systems, 9(2), 2014

The Pearson correlation coefficients are highly significant between the percentage of GE corn and soy planted in the US and

- Hypertension, stroke
- Diabetes prevalence
- Diabetes incidence
- Obesity
- Lipoprotein metabolism disorder
- Alzheimer's, senile dementia
- Parkinson's
- Multiple sclerosis
- Autism
- Inflammatory bowel disease
- Intestinal infections
- End stage renal disease
- Acute kidney failure
- Cancers of the
  - Thyroid
  - Liver
  - Bladder
  - Pancreas
  - Kidney, and
  - Myeloid leukaemia

Scientific Research Vol.6 No.1, January 2015 PP. 42-70

Aluminum and Glyphosate Can Synergistically Induce Pineal Gland Pathology: Connection to Gut Dysbiosis and Neurological Disease

Stephanie Seneff, Nancy Swanson, Chen Li

ABSTRACT

Many neurological diseases, including autism, depression, dementia, anxiety disorder and Parkinson's disease, are associated with abnormal sleep patterns, which are directly linked to pineal gland dysfunction. The pineal gland is highly susceptible to environmental toxicants. Two pervasive substances in modern industrialized nations are aluminum and glyphosate, the active ingredient in the herbicide, Roundup. In this paper, we show how these two toxicants work synergistically to induce neurological damage. Glyphosate disrupts gut bacteria, leading to an overgrowth of Clostridium difficile. Its toxic product, p-cresol, is linked to autism in both human and mouse models. p-Cresol enhances uptake of aluminum via transferrin. Anemia, a result of both aluminum disruption of heme and impaired heme synthesis by glyphosate, leads to hypoxia, which induces increased pineal gland transferrin synthesis. Premature birth is associated with hypoxic stress and with substantial increased risk to the subsequent development of autism, linking hypoxia to autism. Glyphosate chelates aluminum, allowing ingested aluminum to bypass the gut barrier. This leads to anemia-induced hypoxia, promoting neurotoxicity and damaging the pineal gland. Both glyphosate and aluminum disrupt cytochrome P450 enzymes, which are involved in melatonin metabolism. Furthermore, melatonin is derived from tryptophan, whose synthesis in plants and microbes is blocked by glyphosate. We also demonstrate a plausible role for vitamin D3 dysbiosis in impaired gut function and impaired serotonin synthesis. **This paper proposes**

Entropy **2013**, *15*, **1416-1463;** doi:10.3390/e15041416 www.mdpi.com/journal/entropy
Review

Glyphosate's Suppression of Cytochrome P450 Enzymes and Amino Acid Biosynthesis by the Gut Microbiome: Pathways to Modern Diseases .

Anthony Samsel and Stephanie Seneff

- **Abstract:** Glyphosate, the active ingredient in Roundup®, is the most popular herbicide used worldwide. The industry asserts it is minimally toxic to humans, but here we argue otherwise. Residues are found in the main foods of the Western diet, comprised primarily of sugar, corn, soy and wheat. Glyphosate's inhibition of cytochrome P450 (CYP) enzymes is an overlooked component of its toxicity to mammals. CYP enzymes play crucial roles in biology, one of which is to detoxify xenobiotics. Thus, glyphosate enhances the damaging effects of other food borne chemical residues and environmental toxins. **Negative impact on the body is insidious and manifests slowly over time as inflammation damages cellular systems throughout the body.** Here, we show how interference with CYP enzymes acts synergistically with disruption of the biosynthesis of aromatic amino acids by gut bacteria, as well as impairment in serum sulfate transport. Consequences are most of the diseases and conditions associated with a Western diet, which include gastrointestinal disorders, obesity, diabetes, heart disease, depression, **autism**, infertility, cancer and Alzheimer's disease. We explain the documented effects of glyphosate and its ability to induce disease, and we show that glyphosate is the "textbook example" of exogenous semiotic entropy**: the disruption of homeostasis**

J Environ Anal Toxicol 2014, 4:2

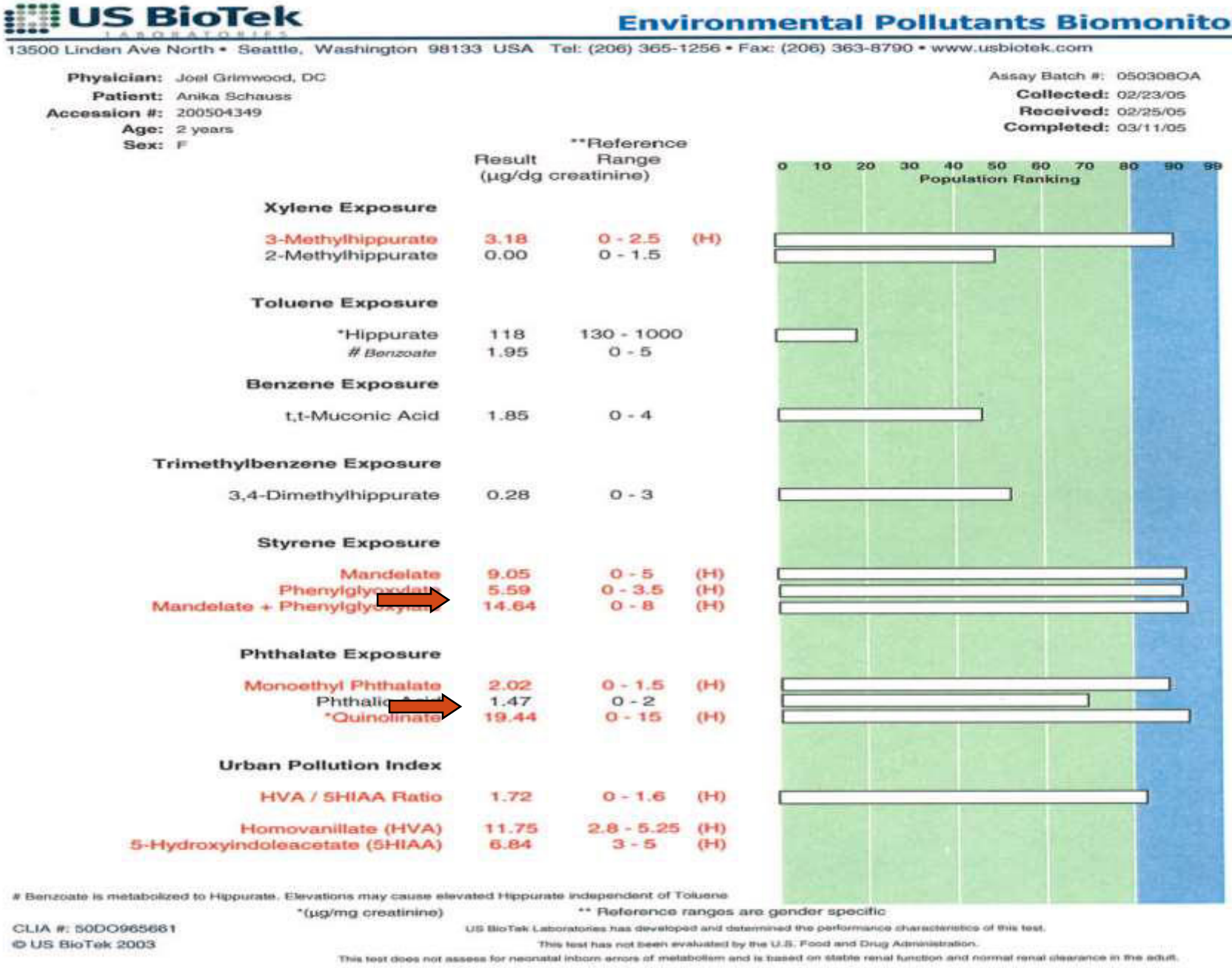
Detection of Glyphosate Residues in Animals and Humans

Monika Krüger, Philipp Schledorn, Wieland Schrödl, Hans-Wolfgang Hoppe, Walburga Lutz and Awad A. Shehata, *Institute of Bacteriology and Mycology of Veterinary Faculty, University of Leipzig, Germany*

Abstract

In the present study glyphosate residues were tested in urine and different organs of dairy cows as well as in urine of hares, rabbits and humans using ELISA and Gas Chromatography-Mass Spectroscopy (GC-MS). The correlation coefficients between ELISA and GC-MS were 0.96, 0.87, 0.97and 0.96 for cattle, human, and rabbit urine and organs, respectively. The recovery rate of glyphosate in spiked meat using ELISA was 91%. Glyphosate excretion in German dairy cows was significantly lower than Danish cows. Cows kept in genetically modified free area had significantly lower glyphosate concentrations in urine than conventional husbandry cows. Also glyphosate was detected in different organs of slaughtered cows as intestine, liver, muscles, spleen and kidney. Fattening rabbits showed significantly higher glyphosate residues in urine than hares. **Moreover, glyphosate was significantly higher in urine of humans with conventional feeding. Furthermore, chronically ill humans showed significantly higher glyphosate residues in urine than healthy population**. The presence of glyphosate residues in both humans and animals could haul the entire population towards numerous health hazards, studying the impact of glyphosate residues on health is warranted and the global regulations for the use of glyphosate may have to be re-evaluated.

Exposure to plastics (drinking from plastic bottles)



US BioTek LABORATORIES

Environmental Pollutants Biomonitor

13500 Linden Ave North • Seattle, Washington 98133 USA Tel: (206) 365-1256 • Fax: (206) 363-8790 • www.usbiotek.com

Physician: Joel Grimwood, DC
Patient: Anika Schauss
Accession #: 200504349
Age: 2 years
Sex: F

Assay Batch #: 050308OA
Collected: 02/23/05
Received: 02/25/05
Completed: 03/11/05

	Result (µg/dg creatinine)	**Reference Range	
Xylene Exposure			
3-Methylhippurate	3.18	0 - 2.5	(H)
2-Methylhippurate	0.00	0 - 1.5	
Toluene Exposure			
*Hippurate	118	130 - 1000	
# *Benzoate*	1.95	0 - 5	
Benzene Exposure			
t,t-Muconic Acid	1.85	0 - 4	
Trimethylbenzene Exposure			
3,4-Dimethylhippurate	0.28	0 - 3	
Styrene Exposure			
Mandelate	9.05	0 - 5	(H)
Phenylglyoxylate	5.59	0 - 3.5	(H)
Mandelate + Phenylglyoxylate	14.64	0 - 8	(H)
Phthalate Exposure			
Monoethyl Phthalate	2.02	0 - 1.5	(H)
Phthalic Acid	1.47	0 - 2	
*Quinolinate	19.44	0 - 15	(H)
Urban Pollution Index			
HVA / 5HIAA Ratio	1.72	0 - 1.6	(H)
Homovanillate (HVA)	11.75	2.8 - 5.25	(H)
5-Hydroxyindoleacetate (5HIAA)	6.84	3 - 5	(H)

0 10 20 30 40 50 60 70 80 90 99
Population Ranking

Benzoate is metabolized to Hippurate. Elevations may cause elevated Hippurate independent of Toluene

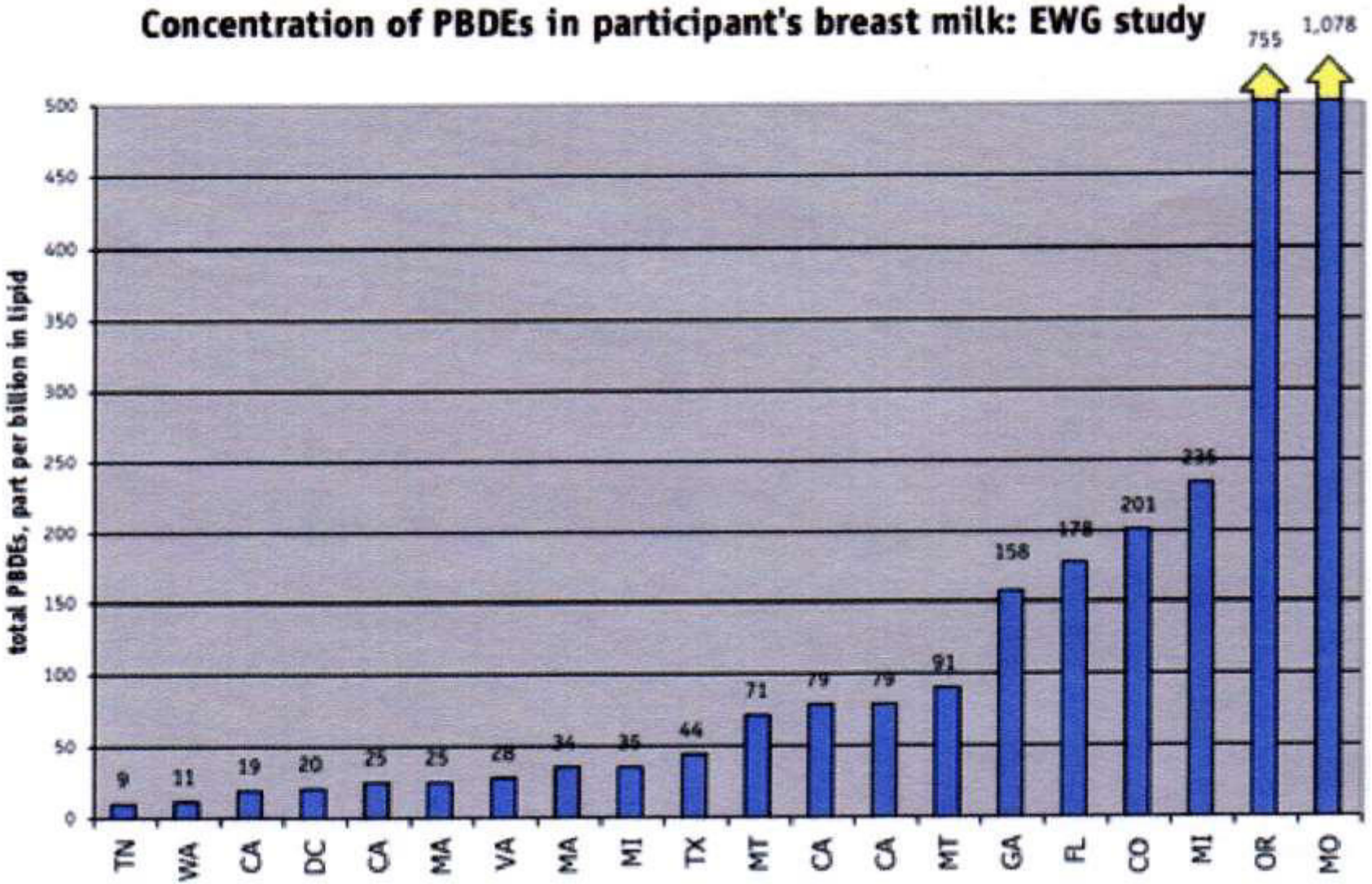
*(µg/mg creatinine)

** Reference ranges are gender specific

CLIA #: 50D0965661

US BioTek Laboratories has developed and determined the performance characteristics of this test.
This test has not been evaluated by the U.S. Food and Drug Administration.
This test does not assess for neonatal inborn errors of metabolism and is based on stable renal function and normal renal clearance in the adult.

Mother-to-child toxin transfer in breast milk



Eliminating Glyphosate, Pesticides, Phthalates, Bisphenol A, wood preservatives, petrochemicals

- Eat organic
- Deep Purple (BioPureUS.com) – freeze dried Acai, pomegranate, plum
- Rosehip – natural ascorbates and their needed co-factors
- Vit E, Glycine und Selenium
- Core (BioPure = zinc, manganese, biotin, P5P, etc.)
- Homeopathic auto-urine therapy (AUT): H-Series of 1:5 dilutions. Succuss 50 times. After step 6 (=H6), test with ART. The dilution that gives the strongest yang state is used. 8 drops hourly for 2 days, then qid. Renew weekly, since antigens in urine will change rapidly (more: see protocol handout)
- Homeopathic “simile” (i.e. glyphosate 12 C)
- Binders: ZeoCLear 1-2 scoops tid, chlorella 8 tbl, microSilica 1scoop between meals and/or at bedtime (all from BioPure)
- Sauna therapy
- Laser detox with glyphosate, plastic, etc.

Sources of Mercury in the autistic child

1. Environmental

- 1977-2002 increase in environmental Hg 3–5 fold (UNEP,2002)
- 1790-1990 increase of environmental Hg 20 fold, in fish at least 1000 fold (Bender 2002 Mercury Policy Project,USA)
- Air: today 25 times higher Hg level then 200 years ago (J.Mutter et al)
- **"Environmental mercury release, special education rates and autism disorder: an ecological study of Texas"**

  F.Palmer et al., Health and Place, Vol 12, Issue 2, June 2006, pp 203-209)

"on average, for each 1000 lb of environmentally released mercury, there was….a 61% increase in the rate of autism"

2. Mother : 2/3rds of body burden passed on to child during gestation and breastfeeding

- 70-80 % of mother's Hg burden from amalgam fillings
- Stoz et al 1995: Hg in umbilical chord vein 0.2-5ng/ml
- Jedrychowski et al 2005: Neurodevelopmental problems in children, when Hg in chord blood over 0.8 ng/ml
- Toxin transfer during gestation and lactation period can be significantly reduced by giving the mother regular doses of the algae chlorella (BioPure/sound cracked): 12 -30 tbl. 3 times /day "Algenpraeparat hilfreich bei Amalgamausleitung" D.Klinghardt Erfahrungsheilkunde 7/1999, 435-438

3. Vaccines

- Joachim Mutter: ***Mercury and Autism: Accelerating Evidence***. Neuroendocrinol *Lett ers 2005; 26 (5): 439-446,* Institute for Environmental Medicine and Hospital Epidemiology, University Hospital Freiburg, Germany
- Geier DA, Sykes LK, Geier MR: J Toxicol Environ Health B Crit Rev. 2007 Dec;10(8):575-96
  - ***A review of Thimerosal*** *(Merthiolate) and its ethylmercury breakdown product: specific historical considerations regarding safety and effectiveness*
  - Thimerosal (ethyl-mercury thiosalicilate) from vaccines, Rh-prevention (Rhogam), other medications
  - Autism and ASD is absent in the Amish community where children are not vaccinated. As soon as they do, they also become ill
  - Mercury is still in most flu vaccines, Hep B vaccine and in Rhogam (Rhesus prevention). It has been detected (unpublished research) in trace amounts in most other vaccines

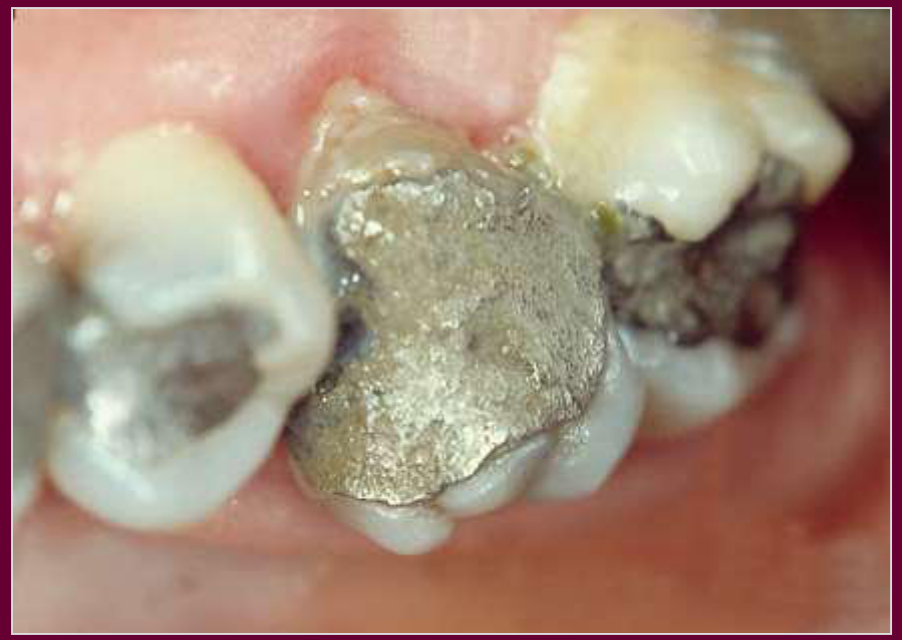
Maternal amalgam dental fillings as the source of mercury exposure in developing fetus and newborn. Palkovicova L, Ursinyova M, Masanova V, Yu Z, Hertz-Picciotto I. **J Expo Sci Environ Epidemiol. 2007 Sep 12**

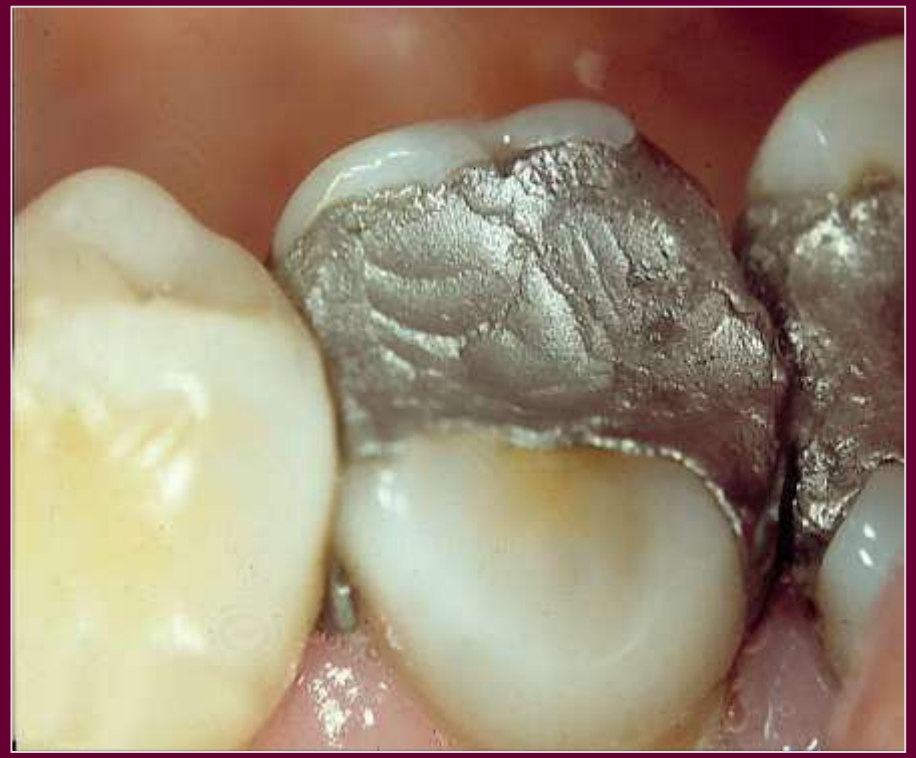
Dental amalgam is a mercury-based filling containing approximately 50% of metallic mercury (Hg(0)). Human placenta does not represent a real barrier to the transport of Hg(0); hence, fetal exposure occurs as a result of maternal exposure to Hg, with possible subsequent neurodevelopmental disabilities in infants. This study represents a sub-study of the international NIH-funded project "Early Childhood Development and polychlorinated biphenyls Exposure in Slovakia". The main aim of this analysis was to assess the relationship between maternal dental amalgam fillings and exposure of the developing fetus to Hg. The study subjects were mother-child pairs (N=99). Questionnaires were administered after delivery, and chemical analyses of Hg were performed in the samples of maternal and cord blood using atomic absorption spectrometry with amalgamation technique. The median values of Hg concentrations were 0.63 mug/l (range 0.14-2.9 mug/l) and 0.80 mug/l (range 0.15-2.54 mug/l) for maternal and cord blood, respectively. None of the cord blood Hg concentrations reached the level considered to be hazardous for neurodevelopmental effects in children exposed to Hg in utero (EPA reference dose for Hg of 5.8 mug/l in cord blood). A strong positive correlation between maternal and cord blood Hg levels was found (rho=0.79; P<0.001).

Levels of Hg in the cord blood were significantly associated with the number of maternal amalgam fillings (rho=0.46, P<0.001) and with the number of years since the last filling (rho=-0.37, P<0.001).

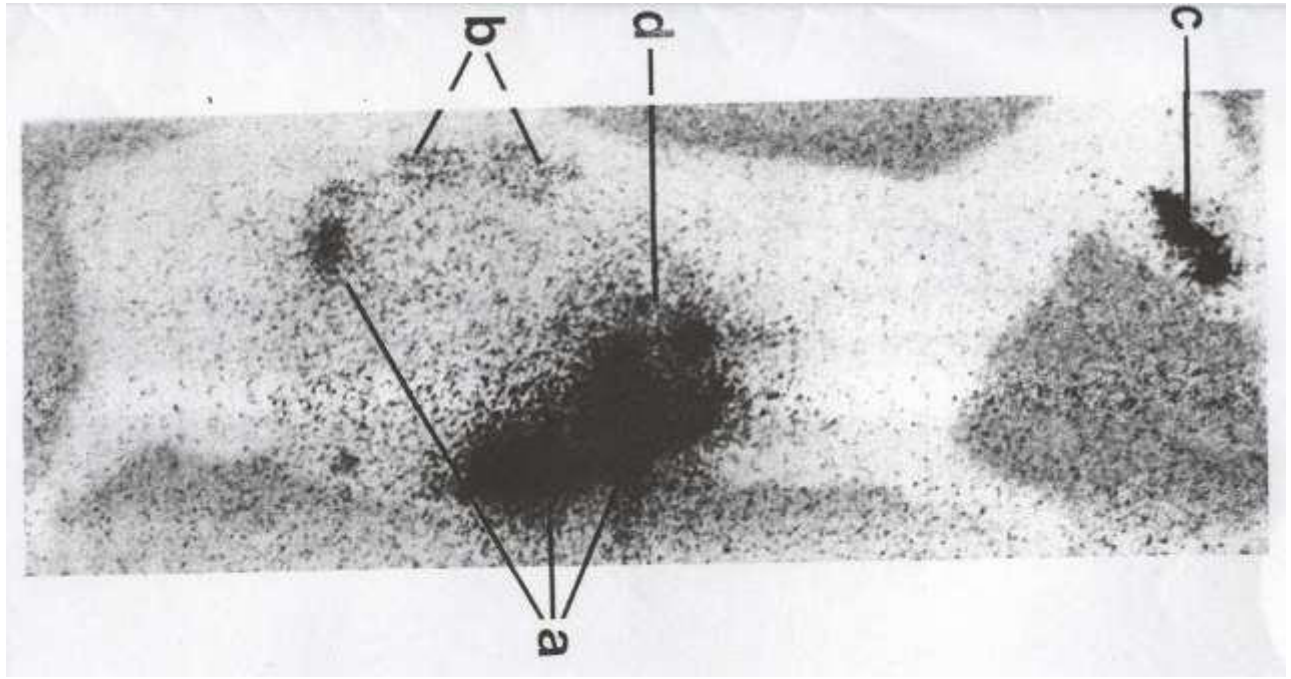
These associations remained significant after adjustment for maternal age and education. Dental amalgam fillings in girls and women of reproductive age should be used with caution, to avoid increased prenatal Hg exposure.

This is what mom had in her mouth when she was pregnant; child was diagnosed with ASD at age 2



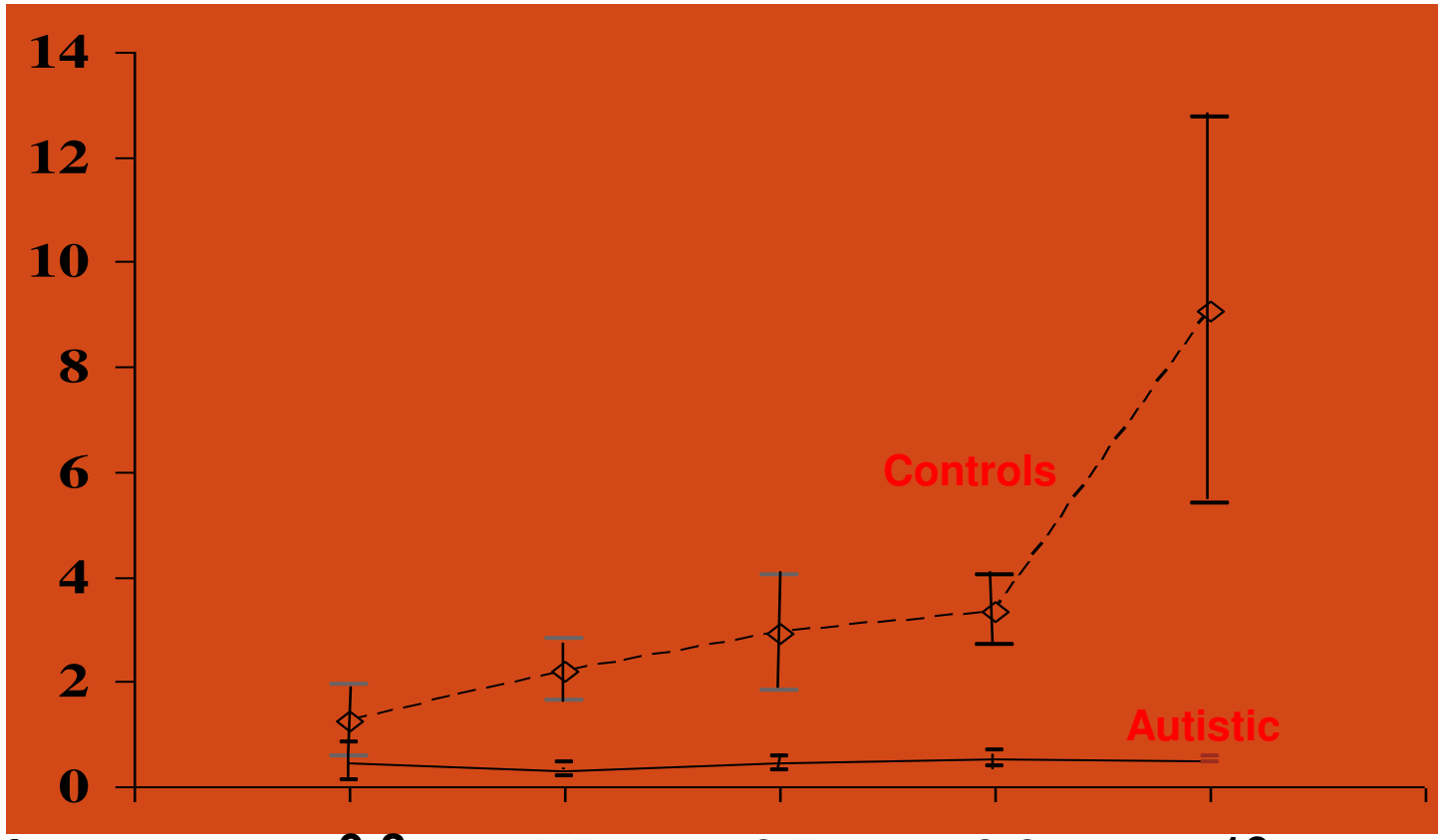


Mercury compartmentalizes in a sheep after placement of several amalgam fillings (Vimy, Lorscheider et al)



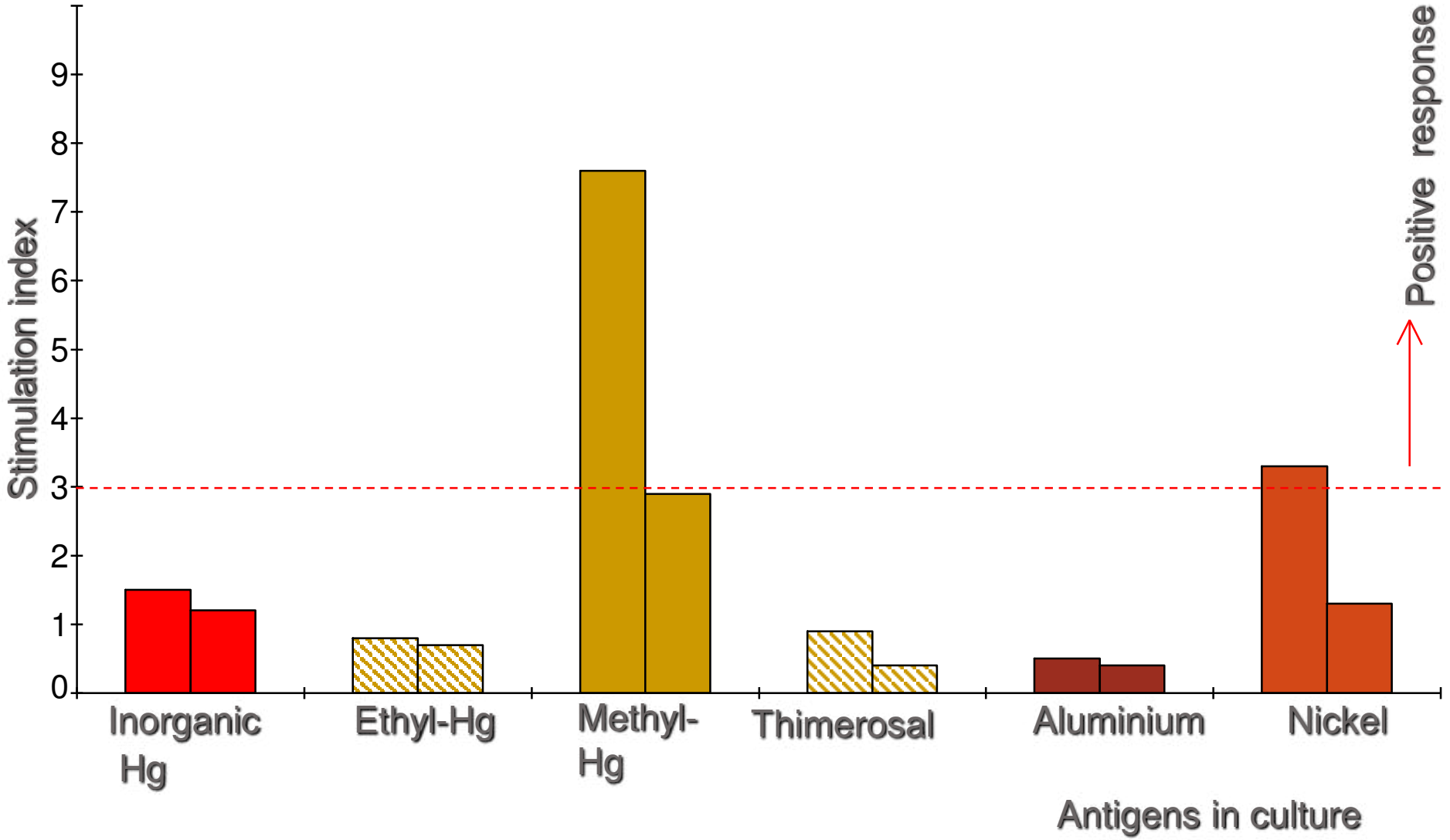
MERCURY BIRTH HAIR LEVELS VS. AMALGAM FILLINGS IN AUTISTIC AND CONTROL GROUPS

AUTISTICS SEEM LESS CAPABLE OF EXCRETING MERCURY AS INFANTS.

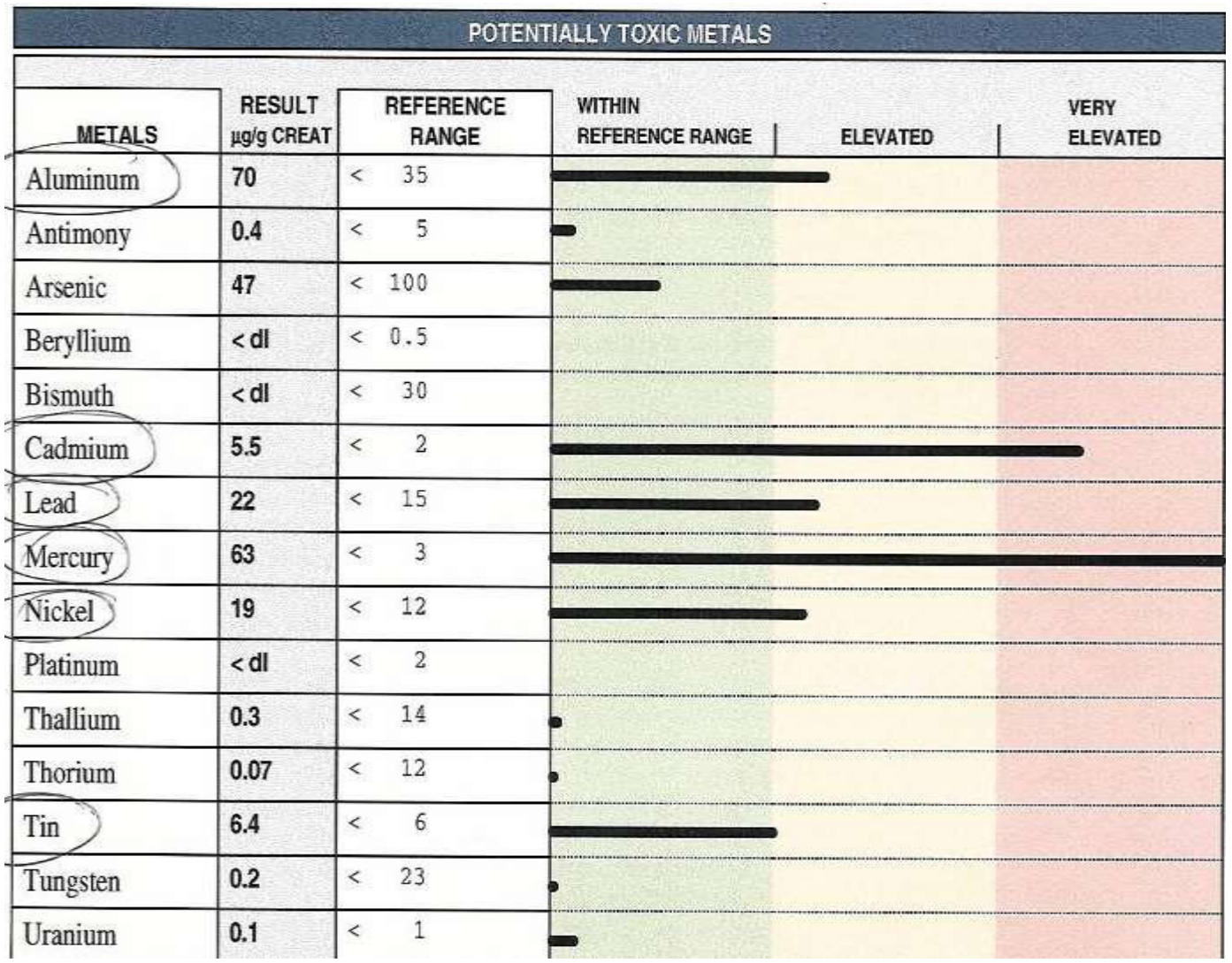


Holmes, A.S., Blaxill, M.F., Haley, B.E., 2003. “Reduced levels of mercury in first baby haircuts of autistic children”. Int. J. Toxicol. 22, 277–285.

Peter M, 6 year old autistic boy
Positive to methyl Hg and Ni. Before and after 6 week Chlorella/Cilantro detox



Challenged Urine Panel



POTENTIALLY TOXIC METALS

METALS	RESULT µg/g CREAT	REFERENCE RANGE
Aluminum	70	< 35
Antimony	0.4	< 5
Arsenic	47	< 100
Beryllium	< dl	< 0.5
Bismuth	< dl	< 30
Cadmium	5.5	< 2
Lead	22	< 15
Mercury	63	< 3
Nickel	19	< 12
Platinum	< dl	< 2
Thallium	0.3	< 14
Thorium	0.07	< 12
Tin	6.4	< 6
Tungsten	0.2	< 23
Uranium	0.1	< 1

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Urinary porphyrins

HPLC-UV+Fluorescence

	nmol/l	nmol/gCr	%	reference nmol/gCr	Interpretation
Uroporphyrins I &III (UP)	37	33	7,9%	8-20	Increased rate
Heptacarboxy porphyrin (7cxP)	4,2	3,8	0,9%	2,5-4,5	Average Rate
Hexacarboxy porphyrin (6cxP)	1,3	1,1	0,3%	0,5-1,5	Average Rate
Pentacarboxy porphyrin (5cxP)	5,8	5,2	1,2%	2-4	Slightly increased rate
Precoproporphyrin (PrCP)	18,0	16,0	3,8%	5-9	Increased rate
Coproporphyrins I & III (CP)	405	362	89,3%	100-200	Increased rate
PrCP/UP PrecoP/Uro ratio		0,48		0,2-0,5	
(5cxP+PrCP)/(UP+7cxP) ratio		0,6		0,3-0,6	
PrCP/5cxP		3,1		1,5-3	
PrCP/CP PrecoP/COP ratio		4,4	%	2-6	
CP / UP copro/uro ratio		10,90		5-9	

Interpretation

Urinary Porphyrin Profile suggestive a moderate mercury toxic effect on bodily physiology high in coproporphyrin

Urinary porphyrin profile ia a powerful biochemical tool in diagnosis of intoxication associating sensitivity, specificity and quantificity

* sensitivity- because heme biosynthesis is highly sensitive to inhibition by many inorganic toxicants such as Mercury, Lead, Arsenic, Aluminium as well as organic agents: chlorinated benzene, biphenyls (PCB), dioxins (TCDD) and also alcohol.

* Specificity-because nearly each toxics generates a specific urinary porphyrine excretion pattern for example: Biphenyls, Dioxins, Aluminium inhibit an early enzyme on porphyrin biosynthesis pathway Uro-Decarboxylase, Mercury inhibits Copro-oxydase and L

*Quantificity or quantitative relationship between increase of specific porphyrins species and toxic or heavy metal body burden with a high degree of correlation designating it as a reliable biomarker for chelation therapy

urinary creatinine ***1120*** ***mg/l***

Ca-Na_2-EDTA (caveat: this is not sodium EDTA!!!)

Ca-EDTA slow push/fast drip

50 mg/kg, not to exceed 3 gm $T^{1/2}$ about 30-45 minutes. 6 hr. urine collection

DMPS challenge

IV: 3-5 mg/kg (250 mg max), **slow** push (5-10 min.)

Oral: 10 mg /kg BW (5 mg/kg children), empty stomach(empty bladder).Withhold food about 2 hrs.Encourage ~

0.5L fluid over next few hrs. Collect all urine for 6 hrs.

DMSA challenge (oral):20-30 mg DMSA/kg BW as oral bolus on

empty stomach (≤ 2 gms).Withhold food about 2 hrs. Encourage ~ 0.5L fluid over next few hrs. Collect all urine

for 6 hrs. J Nutr Envir Med (1998) 8:219-231

D-Pencillamine protocol- 500mg three times per day 2 days per week (R.Jaffe PhD)

Desferal: reconstitute vial with 10 ml distilled water. Inject half segmentally subcutaneously around the abdomen. The other half 2 - 3 days later. Keep refrigerated

Other intravenous options

- IV Vitamin C: 37-50 grams in 500 ml aqua dist with 10 ml Ca Gluconate
- Glutathione: 600-4000 mg 1-3x /Week, IV “push” (add i.m or i.v Magnesium 1-2 times weekly)
- Alpha-lipoic acid: 600 mg in NaCl (250 cc) over 1 hour
- Phospholipids (Lipostabil): 2 ampoules mixed 50:50 with patient’s own blood. Slowly over 3 minutes
- Conventional NaEDTA protocol (ACAM)
- Zinc DTPA: 1 ampoue once weekly i.v.