

**-Heavy Metal Poisoning, Identification, and Oral Treatment Considerations for Adults-
(Designed for Practitioners and Patients Seeking Alternative Medical Care)**

by

David W. Maloney, Pharm.D, MBA, MA, R.Ph.
(Lt. Colonel, Biomedical Sciences Corps, USAF, Ret.)


PART 1

-Medical Summary Improvements to 4/30/10-

(three years later) ...

“For myself, my chronic mercury poison problem is improving tremendously. I no longer suffer from balance problems, brain fog or memory problems, (numerous) infections, skin cancer, painful generalized body aches, reduced energy levels, coughing or tremors in my hands or ‘mercury shyness’ because I can now look everyone in the eye again. After thirty-five years of osteoarthritis problems in my hands and multiple body joints (Xray confirmed), the problems are gone. Now my cholesterol problem is on decline, my body hair is growing back, especially in my bald spot, and my skin texture and appearance have also improved with no age spots or deep skin lines resulting in a more youthful look. My TMJ complaint has been resolved and my sinus and allergy problems almost non-existent.”

(-from page 30, *Diary of a Poisoned Pharmacist* by Dr. Maloney**)

URINE TOXIC METALS						
		LAB#: U070222-0009-1	PATIENT: David W. Maloney		CLIENT#: 34210	DOCTOR:
		SEX: Male			Fresno, CA	
		AGE: 63				
POTENTIALLY TOXIC METALS						
METALS	RESULT µg/g CREAT	REFERENCE RANGE	WITHIN REFERENCE RANGE	ELEVATED	VERY ELEVATED	
Aluminum	< dl	< 25				
Antimony	0.4	< 0.5				
Arsenic	49	= 120				
Beryllium	< dl	< 0.5				
Bismuth	< dl	< 10				
Cadmium	0.5	< 2				
Lead	1.7	< 5				
Mercury	21	< 3				
Nickel	5.1	= 10				
Platinum	< dl	= 5				
Thallium	0.1	< 0.7				
Thorium	< dl	< 0.3				
Tin	2.8	< 9				
Tungsten	< dl	< 0.7				
Uranium	< dl	= 0.5				
CREATININE						
	RESULT mg/dL	REFERENCE RANGE	2SD LOW	1SD LOW	MEAN	1SD HIGH 2SD HIGH
Creatinine	55	43- 225				
SPECIMEN DATA						
Comments:						
Date Collected:	2/18/2007	Method:	ICP-MS	Collection Period:	timed: 6 hours	
Date Received:	2/23/2007	<dl:	less than detection limit	Volume:		
Date Completed:	2/24/2007	Provoking Agent:		Provocation:	PRE PROVOCATIVE	
Toxic metals are reported as µg/g creatinine to account for urine dilution variations. Reference ranges are representative of a healthy population under non-challenge or non-provoked conditions. No safe reference levels for toxic metals have been established.						
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My first urine test for toxic metals record a chronic seven-fold increase for mercury above the reference range, indicating an extremely toxic situation. I needed help; my immune system is shutting down, too. I got help from my ACAM physician, a board certified internal medicine cardiologist, also a chelating specialist. But I was perplexed at the time. My late December 2006 Complete Blood Count (CBC) reads normal, yet I am totally poisoned by mercury and other heavy metals. At the time, I was on maintenance doses of Lipitor and Prilosec, some Motrin, with prudent fish consumption.

Dr. Maloney's CBC Results of December, 2006

LABORATORY REPORT








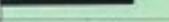


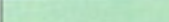
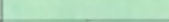


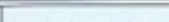


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C.K. CHOW
E. L. NICHOLSON

REQ# Q1 63440014 PATIENT: MALONEY, DAVID GROUP: 30490 PAGE: 1
 RECEIVED: 12/10/06 10:24 AGE: 63Y DOB: SEX: M
 REPORTED: 12/11/06 REF. DRL: PHONE:
 AREA/ROUTE: 45 02 PHONE:
 COMMENTS: FASTING; COLL: 12/9/06 REC'D: 12/10/06 ADVANTAGE #3200710
 PT PH#:

TEST	LOW	RESULT	HIGH	NORMAL RANGE
AST/SBOT		26	0	48 U/L
LIPID PROFILE 1413				
CHOLESTEROL		196	FILE 140	200 mg/dL
TRIGLYCERIDES		57	FILE 10	190 mg/dL
HDL		63	FILE 40	80 mg/dL
LDL CALCULATED		122	FILE 66	130 mg/dL
VLDL CALCULATED		11.4	6.0	35.0
LDL/HDL RISK FACTOR		1.9	0.8	3.0 Ratio
CHOL/HDL RATIO	3.11		3.43	4.97
COMMENT	**			
RISK FACTOR CHOL/HDL RATIO CHOL/HDL				
		MALE	FEMALE	
HALF AVERAGE		3.43	3.27	
AVERAGE		4.97	4.44	
TWICE AVERAGE		9.55	7.05	
THRICE AVERAGE		23.99	11.04	
CBC & AUTO DIFFERENTIAL				
WBC		4.8	4.0	11.0 thou/mm3
RBC		4.62	4.20	5.80 mill/mm3
HEMOGLOBIN		15.7	14.0	18.0 gm/dL
HEMATOCRIT		44.6	42.0	52.0 %
MCV		96	80	100 microns3
MCH		34.1	27.0	35.0 pg
MCHC		35.3	31.0	37.0 gm/dL
RDW		13.1	11.5	14.5 %
PLATELET COUNT		193	150	450 thou/mm3
SEG8		67.4	50.0	75.0 %
LYMPHS		20.8	20.0	44.0 %
MONOCYTES		6.6	0.0	10.0 %
EOSINOPHILS		4.9	1.0	7.0 %
BASOPHILS		0.2	0.0	2.0 %
BANDS		0.0	0.0	5.0 %
SEDIMATE AUTOMATED				
MODIFIED WESTERCHEN		4	0	20 MM/HR
Please note updated reference range due to method change				
(Continued on Next Page)				
UNLESS OTHERWISE INDICATED ALL TESTS WERE PERFORMED AT 1821 E. GUYEN RD., STE. 100, SANTA ANA, CA 92705-0700				
WESTCLIFF MEDICAL LABORATORIES NETWORK	A. 1821 E. Guyen Rd., Ste. 100 Santa Ana, CA 92705-0700 (949) 704-0900	H. 2020 E. Wilmetton, Ste. A San Bernardino, CA 92404 (909) 470-0900	E. 4014 Terrace Blvd., Ste. 340 Torrance, CA 90503 (310) 940-0900	BIOANALYSTS C. K. Chow E. L. Nicholson PATHOLOGISTS Arthur Williams, M.D. Eugene Porech, M.D. Pooheena Yellur, M.D.

(My wife's heavy metal tests were within the reference range for her individual urine test.)

URINE TOXIC METALS							
		LAB#: U070524-0231-1	CLIENT#: 24210				
		PATIENT: David W. Maloney	DOCTOR:				
		SEX: Male					
		AGE: 63					
POTENTIALLY TOXIC METALS							
METALS	RESULT µg/g CREAT	REFERENCE RANGE	WITHIN REFERENCE RANGE	ELEVATED	VERY ELEVATED		
Aluminum	19	< 25					
Antimony	< dl	< 0.6					
Arsenic	38	< 120					
Beryllium	< dl	< 0.5					
Bismuth	< dl	< 10					
Cadmium	0.3	< 2					
Lead	< dl	< 5					
Mercury	2.3	< 3					
Nickel	7.2	< 10					
Platinum	< dl	< 1					
Thallium	0.2	< 0.7					
Thorium	< dl	< 0.3					
Tin	< dl	< 9					
Tungsten	< dl	< 0.7					
Uranium	< dl	< 0.1					
CREATININE							
	RESULT mg/dL	REFERENCE RANGE	2SD LOW	1SD LOW	MEAN	1SD HIGH	2SD HIGH
Creatinine	28	45 - 225					
SPECIMEN DATA							
Comments:							
Date Collected:	5/12/2007	Method:	ICP-MS	Collection Period:	timed: 6 hours		
Date Received:	5/24/2007	<dl:	less than detection limit	Volume:			
Date Completed:	5/30/2007	Provoking Agent:	MERCURY	Provocation:	POST PROVOCATIVE		
Toxic metals are reported as µg/g creatinine to account for urine dilution variations. Reference ranges are representative of a healthy population under non-challenge or non-provoked conditions. No safe reference levels for toxic metals have been established.							
V10.30							
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Dr. Maloney's Second Urine Toxic Metal Test, May 2007

Dr. Maloney's CBC Results of June, 2007

Jun 12 07 08:54a Dr.

P.1

06/08/2007 00:37PM SMC (569)450-3126 The info contained in this fax is confidential and for the sole use of the intended recipient. Page 1

 MALONEY, DAVID W (M-177114) O/P 0928418 LAB
 Spec. Type: BLOOD Collected: 06/08/07 1524 [9695811]
 Result name Result Reference Range
 WBC(thous/mcL): 4.4 4.5-11.0
 RBC(mill/mcL): 4.29 L 4.7-6.1
 Hgb(g/dL): 14.7 14-18
 Hct(%): 41.8 L 42-52
 MCV(fL): 97.3 H 80-94
 MCH(pg): 34.2 H 28.0-32.0
 MCHC(g/dL): 35.1 32.5-35.5
 RDW(%): 12.4 12.5-14.5
 Platelet(thous/mcL): 168 150-400
 MPV(fL): 7.2 L 7.4-10.4
 Lymph - %(%): 23.87 20-43
 Mono(%): 10.73 H 0-8 + 2.7
 Gran(%): 59.01 52-74
 STAT CBC, AUTOMATED DIFFE *FINAL
 Ord Phys: Dr. MALONEY, DAVID W PRINTED: 03:36 P 1

 MALONEY, DAVID W (M-177114) O/P 0928418 LAB
 Spec. Type: BLOOD Collected: 06/08/07 1524 [9695811]
 Result name Result Reference Range
 Eos(%): 5.95 H 0-3
 Base(%): 0.44 0-1
 Lymph - Absolute(X(10)3): 1.10 1.0-4.7
 Mono(X(10)3): 0.49 0.1-1.0
 Gran(X(10)3): 2.71 2.6-8.2
 Eos(X(10)3): 0.27 < 0.7
 Base(X(10)3): 0.02 < 0.2
 End of Report!

STAT CBC, AUTOMATED DIFFE *FINAL
 Ord Phys: Dr. MALONEY, DAVID W PRINTED: 03:36 P 2

HAIR ELEMENTS



LAB#: H060911-0236-1
 PATIENT: David W. Maloney
 SEX: Male
 AGE: 64

CLIENT#: 24210
 DOCTOR: |

POTENTIALLY TOXIC ELEMENTS							
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			66 th	95 th			
Aluminum	5.0	< 7.0					
Antimony	0.017	< 0.066					
Arsenic	0.098	< 0.080					
Beryllium	< 0.01	< 0.020					
Bismuth	0.026	< 2.0					
Cadmium	0.035	< 0.15					
Lead	0.08	< 2.0					
Mercury	0.93	< 1.1					
Platinum	< 0.003	< 0.005					
Thallium	< 0.001	< 0.010					
Thorium	< 0.001	< 0.005					
Uranium	0.006	< 0.060					
Nickel	0.02	< 0.40					
Silver	0.01	< 0.12					
Tin	0.09	< 0.30					
Titanium	0.59	< 1.0					
Total Toxic Representation							
ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	127	200- 750					
Magnesium	11	25- 75					
Sodium	110	12- 90					
Potassium	21	9- 40					
Copper	9.2	1.0- 28					
Zinc	200	130- 200					
Manganese	0.06	0.15- 0.65					
Chromium	0.38	0.20- 0.40					
Vanadium	0.10	0.018- 0.065					
Molybdenum	0.033	0.025- 0.064					
Boron	1.1	0.40- 3.0					
Iodine	0.44	0.25- 1.3					
Lithium	< 0.004	0.007- 0.023					
Phosphorus	187	160- 250					
Selenium	1.1	0.95- 1.7					
Selenium	< 0.01	0.30- 3.5					
Sulfur	50600	44500- 52000					
Barium	0.07	0.16- 1.6					
Cobalt	0.002	0.013- 0.035					
Iron	11	5.4- 13					
Germanium	0.029	0.045- 0.065					
Rubidium	0.023	0.011- 0.12					
Zirconium	0.057	0.020- 0.44					
SPECIMEN DATA				RATIOS			
COMMENTS: Date Collected: 9/6/2008 Sample Size: 0.196 g Date Received: 9/11/2008 Sample Type: Head Date Completed: 9/13/2008 Hair Color: Red Methodology: ICP-MS Treatment: Shampoo: Dove							
				ELEMENTS	RATIOS	EXPECTED RANGE	
				Ca/Mg	11.5	4- 30	
				Ca/P	0.679	0.8- 8	
				Na/K	5.24	0.6- 10	
				Zn/Cu	21.7	4- 20	
				Zn/Cd	> 999	> 800	

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Dr. Maloney's First Hair Test Results of September, 2008

My second urine test for toxic metals on May 30, 2007, tells a different story after many treatments with DMSA, an oral chelating agent designed to remove poisonous metals from my body (extracellular scrub of metals). Mercury is back within the normal reference range. My mercury toxic level dropped from 21 micrograms/gram to 2.3 micrograms/gram creatinine. I am no longer as toxic as before. But now I am showing substantial amounts of aluminum, not recorded in my first urine test. Antimony, lead and tin are not pulled this time; arsenic, cadmium, nickel and thallium are about the same.

My hemoglobin is going lower in my June, 2007, CBC test. My red blood cells (RBCs), hematocrit (HCT), and mean platelet volume (MPV) are all low; while the mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin (MCHC), monocytes (Mono) and eosinophils (Eos) are all high, pointing to an anemic problem. I looked and felt anemic at the time. Dr. McClure's interpretation of these findings are noted on pages 15/16, and the importance of the amino acid cysteine in our bodies. In my case, adding up my eosinophils, basophils, and monocytes values, and exceeding seven, my gut may be inflamed because of the mercury. At this time I was periodically treated for diverticulitis (inflammation and infection of the lower bowel).

After 18 months with continued DMSA treatments, and improving health as well, I asked my chelation doctor for a hair test to look at my intracellular metal problem. DMSA will do a good job with extracellular (outside the cells) metal poisoning elimination, but not intracellular (inside the cells). Noting the hair test results of September, 2008, I added alpha lipoic acid to my treatment regimen because my total toxic representation is becoming worrisome. Aluminum, arsenic, mercury, and titanium need to be reduced. Mercury dental amalgam is still a persistent problem. Dr. Cutler's hair test interpretation identifies a Rule Four match (heavy metal violation) out of Five Rules possible. Mercury toxicity is over expressing arsenic as the problem source of poisoning, resulting in deranged mineral transport of my essential mineral body balance. My calcium/potassium relationship is pointing to a possible mercury-hypothyroid problem (confirmed by TSH findings.); while my calcium/magnesium relationship to sodium and potassium is suggesting a possible adrenal problem as well. (See *Hair Test Interpretation: Finding Hidden Toxicities* by Andrew H. Cutler, Ph.D.)

Disclaimer*

*The content of this presentation is based on scientific findings and observations, and does not imply a treatment for any specific individual, or any liability for personal injury and personal risk taking, or simple misunderstandings of the contents and literature. Each person is different; chelation (key-lay-shun) may not satisfy each person's total health care needs. Nor does this work endorse any product mentioned associated with treatment considerations. The Food and Drug Administration (FDA) reminds people that chelation products alter blood components and can cause serious harm such as dehydration, kidney failure and possible death even under physician supervision. A physician especially trained in alternative medicine to include heavy metal poisoning and chelation therapy such as the American College for Advancement in Medicine (ACAM), or International Academy of Oral Medicine and Toxicology (IAOMT), plus pediatric physicians treating autism and related disorders, and non-mercury using dentists trained

in biological/ holistic practice should be the primary source of suspected heavy metal and related toxins treatment. Not all practitioners are alike; choose a professional with the same caution reserved for conventional practitioners. (800-532-3688 or ACAM. org to use their web site to locate a physician near you by filtering ‘internal medicine or ADHD/ADD or autism or cardiovascular disease or chelation therapy;’ IAOMT.com website or Dental Amalgam Mercury Solutions (DAMS) and IAOMT Safe Removal of Amalgam Fillings websites or 651-644-4572 ; holistic pediatric physicians in your area; or Mercola.com “How to Find a Biological Dentist That Can Treat You Holistically.”) This is a possible path for holistic health improvements for those poisoned by heavy metals and suffering from certain disease states.

Chelation therapy is a medical treatment to remove primarily heavy metals (arsenic, cadmium, lead, mercury etc.) from the human body with the aid of chelating agents, binding to the heavy metals and excreting them through the kidneys or feces. Drugs used to achieve this effect may include oral (found in our bodies) alpha lipoic acid (ALA), dimercapto-propane sulfonate (DMPS) oral and injectable, oral dimercaptosuccinic acid (DMSA) and injectable ethylenediaminetetracetic acid (calcium disodium versante (CaNa₂-EDTA) to name a select few. Transdermal and suppository formulations exist for some of these products. Natural products to remove metals include oral cilantro and chlorella. When toxic heavy metals are removed from the human body, many disease states improve or disappear. Check with your doctor to see if you are allergic (all contain sulfur) to any of the above listed products before taking them.

Introduction

Fifteen hundred years have passed since Hypocrites informed us that diseases are caused by a lack of purification and elimination. Toxins in our environment (internal and external) contribute to perhaps **90%** of our problem disease states according to Dr. J. Higgensen, Head of Cancer Research, World Health Organization, Geneva, Switzerland. Indeed, Dr. Higgensen simply enforces the thought that this world is a precarious and dangerous place to live. (1) The United Nations and World Health Organization are acutely aware of the earth’s toxins, particularly the main heavy metals of aluminum, arsenic, cadmium, lead, mercury and nickel. Equally important are the hundreds of toxic compounds outside of this list also of great concern, especially the Environmental Working Group and their publication in 2005, *Body Burden: The Pollution in Newborns*. Almost 300 chemicals, pollutants and pesticides were detected from the umbilical cord blood in the random group of infants studied. Many of these linked to development problems and cancer at the very beginning of life. Over **80,000,000** Americans are now at risk with a threatened life span reduction of almost **9 years** because of heavy metal exposure alone. (2)

Twenty-three heavy (five times heavier than water) toxic metals exist in our environment as a result of natural or manufactured pollution. All can target organs and organ systems within our bodies. Aluminum (toxic but not a true heavy metal) is found in our water, cooking utensils, food additives, pharmacy products, antiperspirants, cans etc. It is considered a chief suspect in Alzheimer’s disease, and such neurological conditions such as Parkinsonism and other senile dementia forms, and behavior problems in children. (2)

Arsenic is common in the environment because of natural and manufactured chemicals, glass, pesticides, drinking water, meats (especially poultry, except Tyson's and a few others), and wood preservatives. Because of its plentiful existence, we are subject to exposure more often. It has been linked to skin cancers and atherosclerosis problems (#1 on Agency for Toxic Substances and Disease Registry list (ATSDR) for human exposure). (2)

Cadmium is found in dental amalgam, batteries, PVC plastics, paint pigments, dental alloys, motor oils and auto exhaust, shellfish, tobacco smoke, meats, and agriculture use. Cadmium is linked to high blood pressure, heart attack and strokes (#7 on ATSDR list for human exposure). (2)

Lead is used in pipes and drains, cable coverings, batteries, ammunition, fishing, PVC plastics, and crystal glass production, hair dyes, pewter, pottery, tap water, and tobacco smoke. Houses built before 1940 may still contain lead based paint. Highways throughout the world were constantly stained by lead additive gasoline exhaust before its elimination many years ago. Lead is implicated in neurological problems with children and adults (#2 on ATSDR list). (2)

Mercury is considered the most toxic heavy metal (#3 on ATSDR list). It is produced naturally with volcanic activity. Coal burning boilers and heaters (EPA estimates 5000 lives lost per year in the United States.),³ mining, paper manufacturing, paint products (until 1990), algicides, and dental amalgam (silver fillings containing **50%** mercury), certain fish and shell fish, flu shots, contribute to potential exposure. Three forms exist: elemental, organic (up to 100% absorbed in the gastrointestinal tract and the most toxic as methyl mercury), and inorganic mercury (with 7 to 15% absorbed in the gastrointestinal tract). Mercury is also found in high levels in the central nervous system (CNS). It is another chief suspect in Alzheimer's disease and other neurological problems. (2) New Day Health of Canada mails a free CD demonstrating mercury vapor being emitted with simple rubbing from a molar tooth containing dental amalgam.

Nickel can be found in appliances, buttons, ceramics, cocoa, cold-wave hair permanent, cooking utensils, cosmetics, coins, dental material, jewelry, batteries, tap water, and tobacco smoke. It has been implicated in cancers of the throat and lung. (2)

Guidelines issued in 2004 with the Integrative/Environmental Medicine Standard of Care note just 1 ppb (1 part per BILLION) of arsenic in our water supply will raise our chances for individual cancer by 1 in 1000. Cardiovascular risk is even greatly magnified with minute exposure to cadmium and nickel.

According to the Environmental Protection Agency (EPA), one out of six children of approximately 4 million yearly births within the United States, suffer from neurological problems of autism, attention deficit disorder (ADD), and learning disabilities related to lead or mercury contamination in the mother's womb concentrating in the placenta and cord blood, including breast milk. According to recent figures, at least 673,000 children in the United States suffer from autism alone, or 1 per 100 births. Mercury poisoning affects more people with amalgam (silver) dental fillings as the most common source of exposure states the EPA, with 70% of Americans not knowing this major fact. Even the Center for Disease Control (CDC) scores toxic metal exposure in the U.S. as the number one health hazard in our children. To resolve this, preventive care becomes the key for the health care system of the 21st Century according to the Integrative/Environmental Medicine Standard of Care Guidelines. (2, 4, 5, 6-8)

It is also recognized that low metal toxicity very much exists without our population's knowledge because of accumulative low level toxic metal exposure, which is not seen or seldom felt until later years in an individual's life when toxicity reaches a saturation point within their bodies and/or it disrupts important enzymatic pathways enough to cause disease state symptoms (**chronic poisoning**.) (9) Nor do most health practitioners realize it demands intervention to correct the damage because the metals are strongly bound to the central nervous system (CNS), and inside and outside the cell walls. Conventional laboratory tests by pass this most important problem and the disease state continues unrecognized. Mercury poisoning alone can cause allergies, Alzheimer's, amyotrophic lateral sclerosis (ALS), anxiety, autism, chronic fatigue syndrome, certain digestive problems, some Crohn's Disease, depression, diabetes, emotional and mental problems, headaches, insomnia, Lupus disease, memory loss, multiple sclerosis (MS), rheumatoid arthritis to name only a few. (1,5,11,12,13,14,15,16,17,18)

This little explored area of medicine demands the focus of today's health system. This focus is the key to preventive medicine at its best and health care cost reduction world-wide. This health care prevention will improve and prolong the lives of today's population and the countless future generations to come. It recalls the story and search for the Fountain of Youth with its 'vitality restoring waters,' once sought by the Spanish explorer Ponce de Leon in Florida in the 1500's (10)

-General Heavy Metal Symptoms-

Heavy metal general poisoning symptoms may include, but are not limited to chronic muscle and joint pain, major fatigue, skin reactions, muscle tremors, headaches, brain fog, depression, digestive reactions, weight problems, tingling sensations, insomnia, and forgetfulness/memory loss to name just a few. (19) Dr. William Walsh of *Nutrient Power* adds mental and emotional problems to this list; Dr. Cutler, in *Hair Test Interpretations: Finding Hidden Toxicities*, emphasizes bipolar disorder, schizophrenia, and child development problems as well.

-Heavy Metal Tests-

Another way to determine possible heavy metal exposure is a simple and easy hair test obtained without a medical prescription through Direct Laboratories in Louisiana. Hair test results maybe confusing and difficult to read for the untrained eye. A urine test, with an oral provoking agent such as DMPS or DMSA, can be helpful but available by prescription only through an ACAM or IAOMT provider dose based on kidney, liver, and heart function. A QuickSilver Mercury Tri-Test measuring the heavy metal in urine/blood and hair/blood concentrates is probably the most accurate method to identify methyl mercury/inorganic mercury on board. Also with this test, possible kidney problems can be identified before beginning detox treatment, thus deciding what detox treatment is best for the patient. The Tri-Test is available through QuickSilver Scientific on the net to some states without medical authorization, but California requires a provider authorization. Consult your state providers list to order the test at the Quick Silver web site. For the non-prescription hair test (most ACAM providers can prescribe the hair test for under fifty dollars) do the following:

- 1) Call 800-908-0000 and use “order line.” Patient must be at least 18 years old.
- 2) Tell Direct Labs representative you want to order a heavy metal hair test called “Hair Elements Profile” test showing toxic and essential elements results.
- 3) She will ask your name, address, telephone and date of birth.
- 4) Give her your credit card information over the phone. Cost is \$119.
- 5) Ask her to MAIL you a “hard copy” result.
- 6) Expect envelop for hair analysis to arrive in the mail in 3 to 4 business days.
- 7) Follow directions in hair kit (be sure to give them at least a gram of hair) and mail out in the envelop provided.
- 8) Results will be mailed to your house in 10 days or less. A soft copy can be viewed on line, but is not capable of downloading at this time.

Reading the results of an individual hair test will give you a snapshot of 17 toxic metal possibilities, if found, to compare to a reference standard. Finding some of your values falling into the 68th percentile may be mind relieving if the total toxic representation does not exceed the 68th percentile. Remember, the toxins are additive. A little of aluminum, plus cadmium, added to mercury, lead and arsenic may be a poisonous threat. (20) In addition, twenty two essential body elements are also listed to compare to a standard and percentile range. This will give you the exposure record to given toxins trapped inside your cells suggesting possible derangement of essential elements meeting the body’s needs (See *Hair Test Interpretation: Finding Hidden Toxicities* by Dr. Cutler.). For instance, reduced body zinc levels showing high on hair tests may indicate mercury or another heavy metal is displacing zinc, and reducing or denying overall body metabolism of this important element; or sodium and chloride are low in the presence of mercury. (21,22) Metal and element ratios are also listed at the bottom of the hair test results. In addition, the laboratory will provide you with a report digesting the low and high values you receive on the test, but Cutler’s analysis is far superior in this author’s opinion.

Initial heavy metal poison exposure is normally released from the body via the kidney, fecal routes (**acute poisoning**); sweat glands, and within the hair shaft extending from the hair follicle over time (**chronic poisoning**) sometimes many years. (IAOMT’s *Fundamentals of Biological Dentistry* patient film identifies elemental mercury in amalgam being excreted via the urine; methyl mercury excreted through the liver for natural detoxification, with age and detoxification rates of “fast, moderate, slow” being the limiting steps. Moderate and slow patients, plus geriatric patients reach toxicity levels much quicker.) Exercise, saunas, steam rooms, mineral baths all are ideal methods to promote sweating and heavy metal excretions. But keep in mind the excretion process in the human body for chronic poisoning is not a quick fix or short treatment phase. Lead, attached to bone, for example, has a half life of 20 years (1/2 of the amount of lead is excreted from the body over 20 years.) (23) Inside the hair shaft, the amino acid cysteine is vitally important in binding and conducting the heavy toxic metals to the surface of the skin. Often mercury will not show up in the hair test if the individual is deplete of

cysteine, especially if the individual has a mouthful of silver amalgam dental fillings containing 50% mercury. This means the mercury toxins are overwhelming the amino acid and leaving it supersaturated and non functional; preventing it from even reaching the hair reference standard, and mercury toxicity reaching critical levels within the individual causing many disease states to appear. A urine toxic metals test with a provoking agent may prove very valuable here. (24)

If your hair test shows positive for heavy metals and substantial amounts of toxins are identified, you should share this with your current medical practitioner. Keep in mind, your physician will most likely be unfamiliar with what is presented to him or her. Most medical practitioners are not trained in this capacity and certain bias may exist against the thoughts and practices of chelating experts. Likewise, in my opinion and personal university survey, a majority of dentists are unaware of heavy metal toxicity simply because they are not taught about the dangers of heavy metals in their training. As an adult, your alternatives for proper treatment and good health should now begin with ACAM and IAOMT physicians, and biological practicing (mercury and fluoride free) dentists remembering that ceramic or zirconium crowns, composite fillings, and zirconium implants are best for now. Pediatric patients, ideally, need to be seen by holistic pediatric practitioners. (25) In my opinion, the heavy metal poisoning/dentist/physician/patient relationship can now be explained: physicians are not trained in chronic heavy metal diagnosis, lacking hair test reading skills/Quick Silver TriTest information, or recognizing mercury anemia, and gut inflammation in the process; dentists are not trained about the toxicities of heavy metals and continue (for over 150 years now) to put tons of mercury and other heavy metals into the mouths of patients every year. Over time, the problem continues to harm many patients producing certain disease states while escalating health care costs. Clearly, one side is not addressing the problems introduced by the other side. Clearly, mercury and other heavy metals problems need to be addressed by the practitioner, the ADA, and the FDA for the health of this nation.

In the meantime, for the rest of us, sweat is good, and if you work your body excreting toxins, weight reduction should follow. To enhance this procedure, especially if you are over weight, try using my Modified Ketogenic Diet. It is less spartan than the true Ketogenic Diet, but still gives you three good meals a day. Besides, it has been found that obese people have an inability to secrete GLP-1 (glucagon-like peptide or protein) properly. Insulin resistance (Type 2 diabetes) is noted in GLP-1 deficient people. (26, 27)

Modified Ketogenic Diet

(Not so much a constraint, but a solid direction.

Check with your physician to see if your condition or specific heavy metal poisoning qualifies you for this diet or any other. Dr. Cutler's Hair Test Interpretation book is another source for diet recommendation associated with heavy metal poisoning.) (28)

Stay away from sugar, and other sources of sugar such as fruit, white bread and carbohydrates (especially high fructose corn syrup or "fructose" marked now on items resulting in 1/3 calories being stored as fat per Mercola: *Obesity is a Biochemical Problem Rooted in Excessive Fructose Consumption*) in general. Bread since the 1970's has been replaced with bromide instead of the

original iodine element. Your hair test will identify an iodine shortfall if you have a problem. And according to Dr. David Brownstein M.D. and his books: *Iodine. Why You Need It-Why You Can't Live Without It*, and *Overcoming Thyroid Disorders*, 70% of people do not get enough iodine in their diet. Iodized salt loses almost 100% of its iodine content 30 days after opening because of evaporation. Brownstein has treated hundreds of breast cancer patients successfully by using iodine therapy, which is another slow and demanding treatment. Lynne Farrow follows Brownstein with her good book *The Iodine Crisis*, protocol and breast cancer successes. (29, 30, 31)

Substitute brown bread instead of white bread for up to two slices daily. Oro-wheat containing double fiber and whole grains without high fructose corn syrup or “fructose” is a good substitute. Gluten free products can be obtained from various local sources or make your own.

Very limited pasta, rice, and potatoes. Yes, this is hard. But with the modified diet you can use one of these in your diet once or twice weekly in small portions. Rice is a real concern; all rice contains arsenic. Buy lesser arsenic containing rice products only, such as Thai Jasmine rice, Indian or Pakistan basmati, or California rice ; my wife and I like Thai Jasmine Rice. According to Consumer Reports, *Arsenic in Rice: A Worry*, and an ABC news broadcast of about 18 months ago, most American produced rice contains arsenic in substantial levels. Why? Because the American rice patties are contaminated naturally with arsenic or perhaps fertilized with chicken manure. Most chickens in the USA (excluding Tyson and a few other chicken producers) are fed arsenic to keep the chickens bacteria free. The arsenic gets into the meat; less in the white meat versus the dark meat. Arsenic exposure can lead to cardiovascular disease. (32, 33)

Avoid hot and cold cereals. That means all cereals! So that is it. Eat until you are satisfied!

-Breakfast: eggs, cheese, meat (two slices brown bread) and coffee (no sugar).

Snack: more of the same, or macadamia nuts, but no bread, unless you skipped breakfast bread and need a sandwich now.

-Lunch: meat, fish, (but not Atlantic salmon (34)) or poultry, leafy greens, vegetables (asparagus, broccoli, cauliflower, kale and spinach). No bread. Use free range meats and eggs only!

-Dinner: follow the lunch plan. Dessert: sugar free Jell-O and some heavy cream. No bread. Be sure to use butter, cheese, hollandaise, mustard and mayonnaise, and tabasco to flavor your food accordingly. For complex carbohydrates use: asparagus, artichokes, broccoli, Brussels sprouts, cabbage, celery, cucumbers, dill pickles, eggplant, fermented vegetables: kimchi and sauerkraut (35), kidney beans, garbanzo beans, lentils, lettuce, navy beans, okra, onions, pinto beans, radishes, soybeans, skim milk, soy milk, spinach, split peas, turnip greens, water cress, and zucchini. Don't forget to drink lots of water per day! Bon Appetite!

Why the diet, especially if I am not too overweight? Dr. Dietrick Klinghardt, MD, PhD, advocates a diet protocol to assist in removing neurotoxins from the body.

-Proteins build the necessary precursors to help in detoxification improvements.

-Minerals replenish the crowding out caused by the neurotoxins such as heavy metals, man-made toxins and food preservatives/fluoride.

-Fats to rebuild the nervous system in general.

-Finally, increase daily fluid intake to flush the complexed metals adequately through the kidneys and other organs. (36)

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- Part 2 of this article is designed for the Health Care Practitioner -

About the Author

Dr. Maloney is a graduate of Oregon State University, Corvallis, Oregon, 1967, with a Bachelor of Science degree in Pharmacy. He also holds three master degrees: Master of Public Administration, Golden Gate University, San Francisco, CA 1979; Master of Health Services Management (1987) and Business Administration (1988), Webster University, St. Louis, MO. His doctorate degree in pharmacy is from the University of Arkansas of Medical Sciences (2005), Little Rock, AR., with an emphasis in geriatric medicine.

Serving this nation during the Cold War, Vietnam War and Gulf War, Dr. Maloney was commissioned a second lieutenant in the United States Air Force and served as Chief, Pharmacy Services at many air force installations throughout the world. While on active duty he acquired military degrees from the Air Force Command and Staff College, Air War College, and Air Force Education with Industry serving with National Data Corporation, Atlanta, Georgia. With his last assignment in the service, he and his staff implemented and tested for the air force the new two billion dollar world wide Health Care Composite Computer System which is now found in all pharmacy branches of the armed services, including the Veterans Administration. For his many years of service, Dr. Maloney was awarded two Air Force Meritorious Service Medals, three Air Force Commendation Medals, National Defense Service Medal with Star, Korea Defense Service Medal, and two Outstanding Unit Service Awards. He retired from the United States Air Force shortly after the Gulf War in 1991 as a lieutenant colonel with over 23 years of service to his country. Today he is a registered pharmacist still actively involved in the practice of pharmacy after 50 years, including 20 years in nursing home, hospital, and hospice care. He is a member of the California Pharmacists Association, the American Legion, and the Veterans of Foreign Wars. (Dr. Maloney is not affiliated with ACAM or IAOMT.)

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