

CONDITIONS CAUSED BY OR ASSOCIATED WITH MERCURY

Mercury is another one of those political hot potato subjects.

Many conventional physicians are told mercury is safe. But, research proves that there is a clear-cut toxin connection with health. Clinical treatment proves it.

Mercury is a serious toxin, yet dentists still put it in their patient's mouth and physicians still give it to patients via vaccines.

A little Primer on Heavy Metals and the Mineral Analysis

On the minerals analysis, there may appear high levels of some heavy metals, which are harmful, or toxic minerals. Note that high levels may not appear until subsequent tests are done, after extensive mineral replacement has moved them from soft tissue storage, and put them into circulation, which then makes these minerals available for deposition in the hair. This is a "displacement" reaction, or may be called re-compartmentalization. The several heavy metals that we are considering cause injury to soft tissue, and cause inactivation of the enzymes that require our beneficial minerals.

Many of these toxic minerals have effects on the central and peripheral nervous system: that is, on the brain and nerves that supply the whole body. They interfere with the enzymes that make our body chemistry work, and effect the energy production and use in our cells, and we become just too tired to feel normal.

The body must handle all things brought in, even if these things can not be used for growth, repair or energy production; that is, even if they are toxic and hurt the system. Thus we have a detoxification chemical factory, built-in, to do this. If the enzymes that help us detoxify are inactivated, or broken down, we begin to suffer from toxic reactions to chemicals, and ultimately become food sensitive, allergic, and environmentally sensitive. In addition, the immune system changes, so that the part that fights infection deactivates and we become susceptible to viruses, bacteria, fungus or yeasts (candida), at the same time that we may become sensitized to the chemicals and foods, and proteins, like pollen, in our environment.

Unfortunately, there is no innate detoxification system capable of removing mercury from our body. Mercury has a half life in the body of about 30 years - and that only rids the body of half of it! It takes another 30 years to get rid of the next half!

Lacking a place to start discussing that which could take a thousand pages, I will begin with a list of conditions associated with mercury. I will follow that with a lecture outline from a presentation I made back in 1995.

CENTRAL NERVOUS SYSTEM

Anxiety/nervousness, often with difficulty in breathing
Emotional instability
Exaggerated response to stimulation
Fearfulness
Fits of anger, with violent, irrational behavior
Incoordination
Inability to concentrate
Indecision
Insomnia
Irritability
Lack of self control
Lethargy/drowsiness
Loss of self confidence
Loss of memory
Myoneural transmission failure, resembling Myasthenia Gravis
Manic-depression (Bi-polar Personality)
Mental depression, despondency
Motor neuron disease (ALS) Lou Gerig's Disease
Multiple Sclerosis (MS)
Muscle weakness progressing to paralysis, ataxia
Numbness and tingling of hands, feet, fingers, toes, or lips
Restlessness
Shyness or timidity, being easily embarrassed
Suicidal tendencies
Tremors/trembling of hands, feet, lips, eyelids or tongue
Withdrawal

GASTROINTESTINAL

Abdominal cramps, colitis, diverticulitis
Chronic diarrhea/constipation
Food sensitivities, especially to milk and eggs
Other G.I. complaints

CARDIOVASCULAR

Abnormal heart rhythm

CARDIOVASCULAR Continued

Abnormal changes in the S-T segment and/or
Abnormal blood pressure, either high or low
Characteristic findings on EKG
Lower broadened P wave
Unexplained elevated serum triglycerides
Unexplained elevated cholesterol

IMMUNOLOGIC

Candida and other yeast
Cancer
Mycobacterial
Repeated infections
Viral and fungal

AUTOIMMUNE DISORDERS

Amyolateral sclerosis (ALS)
Arthritis
Lupus erythematosus (LE)
Multiple sclerosis (MS)
Scleroderma

ENDOCRINE DISORDERS

Hypothyroidism (Hashimoto's)
Insulin resistance (proposed Diabetes Type I & II)

HEAD, NECK, ORAL

Alveolar bone loss
Bleeding gums
Burning sensation, with tingling of lips, face
Dizziness: acute, or chronic vertigo
Excessive salivation
Foul breath
Glaucoma (poss. primary cause)
Hearing difficulties
Leukoplakia (white lines, patches on gums)
Loosening of teeth
Metallic taste
Restricted, dim vision
Ringing in the ears

HEAD, NECK, ORAL Continued

Speech and visual impairment
Stomatitis (repeated ulcers or blisters in mouth)
Tissue pigmentation (amalgam tattoo of gums)
Twitching of face muscles
Ulceration of gingiva (gums), palate, tongue

SYSTEMIC EFFECTS

Adrenal disease
Allergies
Chronic kidney disease
Chronic headaches
Cold, clammy skin, especially hands and feet
Diabetes; Syndrome X
Excessive perspiration, w/ frequent night sweats

SYSTEMIC EFFECTS Continued

G-6-PD deficiency
General fatigue
Hypoglycemia (low blood sugar)
Loss of weight
Loss of appetite with or without weight loss
Nephrotic syndrome
Persistent kidney infections
Receiving renal dialysis
Severe dermatitis
Subnormal body temperature
Thyroid disturbance
Unexplained anemia
Unexplained reactivity
Unexplained sensory symptoms, including pain
Unexplained numbness or burning sensations

The following are my lecture note for a presentation I made back in 1995! It is in outline form so you won't get the intimate details, but you will understand enough to get the big picture.

Mercury and the Removal of Mercury

* means referred to again during the lecture: listen, wait for the connection

I. Chemical and physical Properties of Mercury

- A. Symbol **Hg**, for Hydraargyrum -- liquid silver, or watery silver (silver symbol is Ag)
- B. Liquid (changes from solid state) at -38.9°C ., -38.02°F .
i.e. mercury is a liquid at the temperature of iced tea
- C. 13.5 x heavier than water

II. Ancient history

- A. Known to Ancient Chinese, Hindus, Egyptians, and Greeks:
 - 1. Pliny (23-79 AD) described the diseases of Hg miners
 - 2. Well recognized as a toxin throughout history
- B. Source: Mineral Cinnabar (HgS, sulfite of mercury), recovered from land mines.
 - 1. Worlds oldest mine in Almaden Spain, still providing 15% of annual world production
 - 2. Spanish miners ills have been well documented
 - 3. Victorian tall beaver-felt hat makers were well known to be toxic

II. Uses of the various forms of Mercury

A. Elemental Form Hg and Salts HgCl, etc.

1. Dental Amalgams "silver fillings"
 - a. 70 % of the adults in the western world have amalgams
 - b. 100 tons of Hg a year, are used by U.S. dentists alone (1997)
 - c. several formulae: 50-52% Hg, 22% Ag, 12% Cu, and Zn and Sn mercury, silver, copper, zinc, and tin.
 - d. ADA, (American Dental Association) until a few months ago (as of date 7/97), held two patents on the formulae. Sold the formulae *
2. Liquid in thermometers, barometers, b.p. meters, silent switches, kids light-up-sport shoe, lab. Equipment, batteries, electrodes, etc
3. Fulminates of Hg : detonators of explosives (Hg(ONC))
4. Sublimates : antibacterial salts
 - a. Cleansers for walls, floors, lab benches, and sterilization soaks
 - (1) hospitals, laboratories, nursing homes,
 - (2) and for instruments.
 - b. Calomel (mercurous chloride salt): used internally as purgative (for parasites and fungicide).
5. Preservatives in vaccines (*Thimersan*): Flu vaccine, D.P.T., and including the newest ones, Hepatitis B and Hemophilus, C.pox
6. Fungicide and pesticides, and mildewcides (Hg₂Cl₂,) and other salts
 - a. a violent poison : two recent laboratory sudden deaths (hours)
 - b. Uses:
 - (1) Outdoor textiles and fabrics for furniture cushions. shower curtains
 - (2) Control of Dutch Elm disease
 - (3) Turf fungal-disease control
 - (4) In-can additives to Latex Paint
 - (5) Disinfectant of commercial farm seeds:
(problems since 1952 have finally changed this) *
7. Vermilion pigment (no longer allowed in U.S.)
8. Manufacture of paints and plastics, in dye industry, etc.
9. Burning fossil fuel (entire petroleum, and solvent industry)

B. Organic forms : Alkyl mercurials - methyl, ethyl and aryl:

1. Uses
 - a. Cosmetics
 - (1) In Mexico (very heavy levels: do not use them)
 - (2) In hair coloring : major brand in the U.S. (C.)
 - b. Cultural use as aphrodisiac, sprinkled on floor in Folk rituals
 - c. Medical use:
 - (1) Ointments and creams: yellow and gray ointments for eyes and skin
 - (2) Lotions and tinctures:
 - (a) Calomel (oral purgative and fungicide) Caladryl lotion
 - (b) Mercurio-chrome, (painted umbilical stump),

- (c) Merthiolate (painted on raw wounds and hot tonsils)
 - (3) Treatment for syphilis from 1500's
 - (a) Arsenicals replaced it in 1900
 - (b) Penicillin replaced arsenic in 1940
 - (4) Diuretic in 1900's (mercurial salicylate)
 - (5) Homeopathic use: try to avoid any molecules at all
 - (6) Added to injectables
 - (a) ACE (adrenocortical extract , injectable from Switzerland (still used in Mexico: recently stopped in the U.S.) *
 - (b) Vaccines: flu, et. al.
 - (c) Rhogam (antigen given to Rh negative mother after a Rh + baby,
2. Conversion to Methylmercury
- a. Air borne mercury
 - (1) Industrial use puts 55 tons of Methyl mercury into the air each year:
 - (a) Chicago is the worst
 - (b) No place is safe.
 - (2) Volcanoes and forest fires are major mercurial loading events to the air
 - (3) The industrial uses and rain after natural events discharge mercurial forms into the waterways, creeks, streams, and lakes; eventually the ocean.
 - b. Water borne: methylmercury is the common poison :
 - (1) Created when the inorganic forms enter fresh water and saturate ocean sediment.
 - (2) Studied :
 - (a) first in fish and predatory birds, in Sweden in 1950's: due to effects of wildlife
 - (b) later in epidemics of illness in Swedish men
 - (3) Sources to humans: until 1996, thought to store chiefly in
 - (a) bottom feeders (scavengers and shell fish)
 - (b) largest ocean fish: tuna, blue fin marlin, shark and swordfish * (those over 250 lbs.)

IV. Physiology of methylmercury in the human

A. Entrance into our body in these ways:

- 1. Elemental Hg in the teeth goes through alveolar bone and through mucous membranes of the oral cavity :
 - a. soluble in saliva
 - b. galvanization by dissimilar metals in bridges, crowns, gold
 - c. Streptococcus mutans in mouth converts Hg₀ to methylmercury

- d. deposits in bone in cavitations, as sites of chronic infection
- 2. Elemental mercury vaporizes from the dental amalgams during drinking and chewing: *
 - a. electron micrographs show droplets on the surface of the filling
 - b. breath analyzer tests
- 3. Swallowed with the saliva, laden with soluble ions
- 4. Enters through skin, when applied there
- 5. Inhaled, going directly into blood stream, during dental *polishing* and repair
- 6. Through GI (gastrointestinal) mucosa, *bypassing* most bowel detoxication
 - a. Bacteria in bowel make methyl-Hg from the inorganic forms and salts of mercury, which:
 - (1) Alters bowel flora: reduces numbers of beneficial bacteria
 - (a) decreases SCFA (short-chain fatty acids) that feed our lining cells
 - (b) fosters the growth of yeasts *
 - (c) allows colonization by amoebas and parasites
 - (2) Creates bacterial antibiotic resistance (fosters bad bacteria)
 - (3) Damages enzymes systems of the gi mucosa :
 - (a) decreases the 25 % of detoxication done there
 - (b) decreases sIgA (secretory immune globulin A) so we do not resist the bad bacteria: they infect us
 - (c) adds to the effect of leaky bowel syndrome, creating food allergies
 - b. eating fish gives methyl-Hg directly
eating 2 cans of tuna per day will give acute toxicity (EPA 1997)
- 7. Crosses all lipid membranes
 - a. Cell walls (70 % lipid and 30% protein) are penetrated
 - b. Myelin sheath, the insulation of nerves is eroded (associated with MS, and other de-myelinating degeneration) *
 - c. Blood brain barrier (BBB) is traversed
 - (1) 800 % increase in the incidence of brain cancer (? Nutrasweet)
 - (2) Produces massive brain effects :
 - (a) encephalitis effects of sudden heavy exposures (*acute*) as in Minimata Disease
 - (b) encephalitis long term slow effects similar to vaccine effects (*chronic*)

B. Biochemical effects:

1. Depresses MAO (monoamine oxidase, an enzyme of brain function) causing the characteristic depressions of Hg toxicity.
2. Combines with SAM (s-adenosylmethionine) in the enzyme systems of all biologic life
3. Binds to the heme ring (porphyrin) ring of hemoglobin and myoglobin (part of the muscle protein)
 - a. Anemia
 - b. Fibromyalgia
4. Decreases mitochondrial production of energy: CFIDS
 - a. Immune system has to operate on *energy*
 - b. CFIDS is: chronic fatigue and immune deficiency syndrome
5. Hg attaches to the SH (sulfhydryl group)
 - a. in enzymes and deactivates or reduces the rate of reaction of the enzymes
 - b. in the proteins in blood, which account for 10-50 % of antioxidative capacity of the blood
 - c. reduces the antioxidant functions both in the blood and inside cells.
6. Hg inactivates thiolic antioxidative compound: glutathione, which has the principle role in rejuvenating Vit E for cyclic reuse.
7. Hg effects oxygen transfers (intracellular peroxide functions)
 - a. Hg inactivates SOD : interferes with oxygen transfer
 - b. Hg inactivates catalase:
 - (1) slows oxygen transfer
 - (2) inhibits kill effect on "resistant staph" related to skin infections in nurses, hospitals
8. Hg forms *insoluble* complex with selenium (Se):
 - a. Se is a cofactor for glutathione peroxidase
 - b. Se is a cofactor in tetra-iodothyroidine deiodinase: leading to Reverse T₃ syndrome
 - c. Se prevents fibrocystic breast disease, other cysts
9. Hg causes decreased liver transformation of ATPase: mitochondrial enzyme that produces our energy
 - a. Heart failure is now defined as energy failure (mitochondrial failure) so heart fibers can't contract.
 - b. Chronic fatigue : mitochondrial energy failure
10. Hg interferes with DNA synthesis (i.e. messes up our genes):
 - a. mutations, birth defects: California Law ('97) against Hg in teeth
 - b. cancer
11. Hg blocks receptor sites for progesterone & interferes with estrogen
 - a. interferes with reproductive functions, menstrual cycles
 - b. bone metabolism
 - c. heart function
 - d. cerebation (estrogen receptors in brain)

12. Causes thyroid malfunction (See enz. for Reverse & T3 and other modes)
13. Causes adrenal malfunction
14. Hg found to be neurotoxic: inhibiting polymerization of brain tubulin :
 - a. Alzheimer's
 - b. MS etc.
 - c. Peripheral neuropathy
15. Sets stage for, or causes, "autoimmune disease"
16. Hg blocks ATPase (stalls energy cycles)
17. Hg blocks P450 enzymes (vast family of detox enzymes in the liver)
18. Hg blocks glutathione peroxidase and glutathione reductase
19. Mercury load both causes and is worsened by deficiency of minerals
20. Elemental Hg, when detoxified by the thiols (glutathione) is *converted* to methyl mercury which is just as toxic as elemental.

if redundant..... blame it on the mercury

C. Significance:

1. The human body was not designed to handle mercury
2. We have no mechanism to rid our bodies of it naturally
 - a. damages the kidney in effort to clear after heavy exposure: accounts for significance decrease of renal function as we age
 - b. interferes with liver detoxication of other toxins, as we attempt detox in Phase I , leading to the *spreading phenomenon* of MCS (multiple chemical sensitivity)
 - c. excreted through the hair, nails, and skin --- *if we are able to*, but this requires:
 - (1) active sulfhydryl pump to excrete,
 - (2) adequate mineral stores

examples from hair analysis

D. History of Mercury Poisoning:

1. Chronic poisoning was
 - a. recognized by Pliny, and in the Spanish miners in 1700,
 - b. not a wide spread problem until Hg became widely used in the industrial revolution (1830)
 - c. was not recognized in a medical sense until 150 years ago (1850): Mad Hatters disease of "Alice in Wonderland" (1889) Lewis Carroll
2. 20th century recognition of acute disease
 - a. Minimata Disease 1956: The classic disease of massive contaminated water from industrial pollution
 - (1) blood cell binding: total anoxia (lack of oxygen)
 - (2) encephalitis with massive neurological damage
 - b. Grain fungicide exposures in Iraq (1956-72), and elsewhere including the U.S.
3. Current recognition of chronic disease

- a. preponderance of exposures was overwhelmingly dental until 1996
- b. EPA study revealed toxicity of all fish: fresh and ocean

V. Dental use of Mercury

A. American experience:

1. Elemental and methylmercury was widely recognized as toxic
2. Amalgam, i.e. a mixture of metals
 - a. started in Paris in 1820:
 - b. Hg barred from dental use in the U.S.
 - (1) rejected as it expanded and fractured the teeth.
 - (2) widely appreciated to be toxic: from 1848 -1900.
 - (3) ADA was formed to *censure the use* of mercury in dentistry
 - (4) Original word "quack" came from "a user of quicksilver "
3. Brothers Crawcour from France
 - a. came to New York in 1833 with a "cheap filling"
 - b. chased out: because dentist knew Hg was toxic (competition?)
4. 1848, 11 dentists in N.Y. suspended from their society for using amalgam:
reflected the common attitude
5. Began to bill amalgams as "silver fillings" (cheap & for the common man)
4. In 1910's said it was no longer toxic as it was "stabilized"
meaning it wouldn't expand and crack teeth
6. Toxicity was lost in the controversy during stress of WW I and WW II

2. European experience:

1. Current speculation: might not have had WW I & WW II if not for mercury toxicity in the leaders and people !
2. Scientist studied themselves: German Alfred Stock recorded his own illness:

Stage i. Fatigue.

Diminished working capacity.
Irritability.
Slight swelling of nasal mucous membranes.

Stage ii.

Extreme fatigue.
Lack of concentration.
Impaired memory for names, numbers, etc.
Irritability and moodiness.
Sensation of a sheer stupidity..
Nasal obstruction with dryness (stuffy nose).
Nasal discharge, viscous, sticky sometimes bloody.
Tinnitus. Hearing impairment.
Headache, often frontal.
Stomatitis, bleeding gums on brushing
Irregular heart activity
Sometimes diarrhea
Frequent urination
Slight tremor

State iii.

Headache

Dizziness & vertigo
Tremor
Mental incapacity
Despondency and depression
Back pain
Dysuria
Colitis and diarrhea
Nasal catarrh with bloody crusts
Loss of smell
Stomatitis
Bleeding gums
Paradentosis and loose teeth
Increased salivation
Pharyngitis and laryngitis

3. Swedes, the most instrumental in showing accumulative effects
 - a. in 1950 recorded association with wildlife decline:
not much concern for those matters then
 - b. in 1981 (30 years later) started it over again
 - c. reviewed all the old literature and history
 - d. showed liquid mercury droplets on the amalgam surface after
chewing
 - g. corrosion chemist studied his own interaction with Hg and gold
crowns
 - h. oral galvanism of dissimilar metals: the electrical charge causes
neurological problems
 - i. correlated amount of Hg in the brain with amount of amalgams in
mouth at autopsy

C. Comparisons :

1. American have short memories for historical lessons
2. Americans are more gullible
3. Americans perhaps have more neural storage of mercury

VI. History in the Scientific Literature

- A. 1970 : Immune dysregulation (see figure "Dysregulation Chart:")
- B. 1981: Lauren: "the most important depressive elements on the immune cells"
in this order Hg⁺⁺, Cu⁺⁺, Mn⁺⁺, Co⁺⁺.
decrease lymphocyte transformation (part of function)
while Ni and Pb, increase proliferation of the WBC
- C. 1985: HgCl₂ and CH₃HgCl decrease thymidine incorporation into DNA of
lymphc. D. 1986: T cells autoreactor causes autoimmune disease
- E. 1988: Increases T cells and causes deficit in T suppresser levels:
 1. combining depressed immune system with increased freq. of infection
and increase attack on self
 2. causing allergy and the spreading phenomenon of MCS
- F. 1991: Glomerulonephritis in rats:
 1. antibody to kidney produced in this disease
 2. remember acute hepatic necrosis
- G. 1991 WHO reported the acute toxic effects due to the Iraq grain events
Most of the USA. data came from these studies:

and at first they only looked at acute (meaning early, sudden, overwhelming)

- H. Follow-up of the acute Murimata and Iraq cases taught that:
1. If one survives the acute exposure, illness will ensue and become chronic (long term, gradual decline)
 2. and since it does not clear after time
ACCUMULATION causes Chronic disease
- H. 1980 + Finns, Sweden banned use

VI . BOMBSHELLS

A. 1996 EPA of U.S.A. published *Mercury Study Report to Congress VOL.*

I-8 stating:

1. There is no safe level of mercury
2. The fetus is the toxic dump for
 - a. heavy metals
 - b. excess in general, including "recreational drugs"
2. No fish / seafood is safe.
3. Hg is the second most toxic element on earth follows Plutonium (radioactive Bomb of WW II)
4. Hg is worse than Lead:
 - a. but mercury and lead are additive
 - b. Lethal dose concept : LD_{50} , LD_1 LD_{100}
 LD_{50} dose to kill 50% of the study group
 LD_1 dose to kill 1% of the study group
 LD_1 Hg + LD_1 Pb = 100%. Highly synergistic

B. EPA was asked about legislation to stop Hg use in the USA

"Litigation, not legislation" was the answer: reading from Queen

VII . How to determine your mercury load

A. Hair:

1. Depends on detoxication ability: sicker patients can not push it into the hair
2. Is accurate, if one is able to excrete it (except for C. hair products)

B. RBC: useful only for acute and recent exposures: it doesn't stay in the red cells)

C. Whole blood :

1. for acute exposure only
2. cleared from the blood as fast and possible, in anyway possible

D. Chelation challenge with DMPS

1. Terms:

- a. 2,3-Dimercapto-1-Propane Sulfonic Acid, Na salt
- b. Dimival® from German Company -- Hyel : standard for 40 years
- c. Russian DMPS: 75 % pure

2. Procedure: after history and physical exam (with notes to neuro findings)

- a. Obtain base-line minerals in urine and hair
- b. Get basic lab :SMAC with ferritin, Mg, lipids, CBC, T₇ with TSH, UA

- c. Compute renal ability to excrete creatinine (% function of kidney)
- d. Give serial dilution dose of DMPS under the tongue to assay allergy
- e. Give supplements for two weeks
- f. Obtain UCG (pregnancy test) when appropriate (IV used post menstrual in women of childbearing age)
- g. Give 20 min DMPS IV: dose based on weight and kidney function
- h. Collect 24 hour urine for minerals excretion
 - (1) Assess output of Hg
 - (a) **if over .5 ppb** proceed with Hg removal treatment
 - (b) If less than .5 ppb, and very sick
 - (i) give amino acid + mineral IVs and oral supplements
 - (ii) Detox liver, bowel, treat for yeast, etc.
 - (iii) repeat the DMPS challenge in 2-3 weeks
 - (c) Repeat the DMPS challenge and collect urine and measure

VII. How to remove the mercury burden : treatment

- A. Repeat DMPS IV each 2-6 weeks, depending on fragility of person
- B. Required supplementation:¹
 - 1. Se 200 micrograms/day (no Kelp unless *analyzed for Hg* first)
 - 2. Vit E , mixed tocopherols, 400-800/day
 - 3. Vit C 1000-5000mg.day
 - 4. Cystine : not Cysteine (as in n-acetylcysteine, NAC) as it may move it around, but not out
 - 5. Glutathione : 300-600 mg/day div. dose
 - a. binds with methylmercury
 - b. excreted as Hg mercapturic acid in the urine
 - c. not to be used in diabetics who are insulin dependent
 - 6. Garlic: ratio of 1:1 with Chlorella¹
 - 7. These minerals, if low on any analysis
 - a. Zn, Cu, Mn, Cr, Mg, Na, Fe, etc.
 - b. Note: there is a constant Mg deficit when Hg is present.**
 - c. No amount of oral and IV will make up for the drain.
 - d. One can not detox with a low sodium (Na)
 - e. Hg displaces Zn, Cu,
 - f. inhibits Fe absorption
 - g. *use no colloidal minerals* (P chem size to great for absorption)
 - 8. Herbals: Liver detox: Silymarin and immune support, echinacea

¹ We previously advised the use of Chlorella: southern algae (pond scum) with cracked shell
(a). found to move Hg from cells into fluids (excretion in urine of Hg increased, but it turns out Hg is IN THE CHLORELLA)
(b). Dose used was 3-4 x daily, to tolerance & doubled usual dose on day of Hg removal & DMPS IV. No wonder the excretion of Hg went up on this regimine.

9. Vitamins, especially Bs
10. EFA, Omega 3 & 6 (essential for membrane maintenance, cell walls)
If fish oil is used, it needs a negative assay for Hg .Use flax if tolerated.
11. Eat only organic foods : see attachment (chart of minerals in commercial):
12. Use Cilantro in abundance, if obtained organic!
13. High protein diet (Atkins, Sears)
14. Hypericum, (St. John's Wort) this revs up the P 450 hepatic enzymes!
15. Repeat the lab evaluations at least each 3 months of treatment, preferably each 3-4 weeks (each 6th-8th treatment)
16. Treat until urine recovery is below .5 ppb. Then wait and test in 3 months!
 - a. average need for DMPS is 17-30 + injections.
 - b. incomplete treatment is as bad as no treatment.

VIII. Possible ill effects:

- A. Rash: denotes mercury in the skin, binding with the DMPS
Treatment: B₁₂ IM , 1-2 cc q 2-3 hours through 24 hours, or until it stops.
- B. Wipe out : headaches, fatigue: denotes mercury moving and causing symptoms
Treatment: GSH (reduced glutathiones) 25/mg/kg, one dose
- C. Rebound reaction: feels good for several days, then feels bad again:
 1. Due to re-compartmentalization.
 2. Will stop after enough is removed.
- D. If one has allergies and neurologic symptoms as detox proceeds, it could flare and then improve (i.e. the reverse of the above # C)
- E. The T-cell count will improve as one goes through treatment: esp. noted in CFIDS

IX. The FDA protocol is different in that it :

- A. Involves much more extensive use of the lab: see the attachment
- B. Requires proof that mercury
 1. is not being excreted before the DMPS is given
 2. is excreted after the DMPS is given
 3. that DMPS provides improved *objective* parameters of improvement

X. Summary

- A. Mercury is not meant to be in the human body: causes gross malfunctions
- B. Mercury may be one of the primal root causes of
 1. many of our classical old diseases
heart disease, neuroses, psychoses, cancer, gum disease with tooth loss, thyroid and adrenal dysfunction, etc.
 2. most of our "new" 20th Century Diseases:

Allergies, Chronic fatigue and CFIDS, Chronic Candidiasis, Leaky bowel syndrome, Fibromyalgia, food allergies, MCS, anxiety and panic attacks, etc.

- C. Mercury must be removed before the above diseases can be successfully approached or resolved.
- D. DMPS has a 40 year record of safety and efficacy in removal of mercury
- E. It should be available to any competent doctor to use for those who need it

END