Mercury Amalgam Fillings: Lies, Damn Lies and Statistics

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Recently I reported on the methodology and machinations involved in vaccine-related injury cover-ups by the elitists in science and government at the Simpsonwood Conference on Thimerosal in vaccines. A new scandal has been recently released concerning the safety of mercury contained in dental amalgam, which is of equal magnitude and again showing the modus operandi of the government/elitist scientists coalition. The official name of the report is: *Dental Amalgam: A Scientific Review and Recommended Public Health Service Strategy for Research, Education and Regulation*.

This report is described as the Trans-agency Working Group on the Health Effects of Dental Amalgam, which included representatives of the National Institutes of Health, the Center for Devices and Radiological Health of the U. S. Food and Drug Administration, the Centers for Disease Control and Prevention and the Office of the Chief Dental Officer of the Public Health Service. These organizations requested that the Life Sciences Research Office (LSRO) as a subcontractor of BETAH Associates undertake an independent third-party review of the topic. BETAH received the contract from the Department of Health and Human Services without bidding, as is proscribed by law.

To carry out this mandate, they were asked to consider peer-reviewed, primary scientific and medical literature published between January 1, 1996 and December 31, 2003 addressing this specific question. This begins our lesson in how to cover-up a major health disaster using scientific "evidence-based" methods meant to impress the media and public at large.

In this review, I will consider only the Executive Summary, which is written for the media and the lay public.

Overwhelm them with your credentials

Students of this methodology will always be impressed by the length the designers of these "independent studies" will go to convince the public and particularly the media that they have assembled the world's greatest experts to study the matter in question. As we saw in the case of the Simpsonwood Vaccine Study, they assembled similar "experts" to study the effects of mercury in vaccines, only to find out that their "experts" were not so expert after all and that many of the true experts were not invited.

In the Executive Summary they list the types of experts collected for this "independent study". Invited were experts in immunotoxicology, immunology, allergy, neurobehavioral toxicology, neurodevelopment, pediatrics, developmental and reproductive toxicology, toxicokinetics and modeling; epidemiology; pathology; and general toxicology, all very impressive titles. Yet, most critical in all these specialties is

their expertise in the area of mercury toxicology, pathology and developmental pathology.

You can be a world expert in immunology and not know a single thing about mercury toxicity, especially on neuronal and neuroglial systems. It is interesting to note that in the Executive Summary they state " No member of the Expert Panel expressed a public opinion regarding the potential adverse effects of dental amalgam prior to or during the review period".

While this might imply impartiality, it can also indicate a lack of expertise in the area of mercury and its pathophysiological effects. One would think that if you were truly an expert in the field, somewhere along the line you would have expressed an opinion publicly either on its safety or its danger. Even so, I will accept said item as an expression of impartiality since the names and institutions of the review panel are not disclosed in the Executive Summary.

Now let us look at some of the deceptive tactics these studies use.

While accumulating a large base of scientific and medical studies, be sure to control the information.

As stated, the literature review was limited between January 1, 1996 and December 2003. Immediately, one has to ask the most obvious question-Why were the dates of the literature limited? In fact, a number of very important studies concerning the immunological, as well as other addressed effects of mercury appeared just before the beginning date. For example, Queiroz and Perlingeiro published a study in 1994 on the immunologic effects of inorganic mercury (the same kind found in dental amalgam) in workers exposed to mercury. [1] At least a half-dozen similar studies on both animals and humans were eliminated by this date-limitation method.

Similarly, a significant number of studies were excluded that were concerned with the effects of mercury on the brain. This was not only done by using an exclusionary dating limit, but also by severely restricting the types of studies that would be accepted. Out of some 961 studies found within these dates, more than two thirds were excluded.

Dr. Boyd Haley's studies were excluded, even though he has conducted some of the most important research on the biochemical effects of inorganic mercury, specifically from dental amalgam. His results have never been refuted. In addition, he has proven, beyond any challenge, that mercury vapor is released from dental amalgam fillings in large concentrations, even in fillings over 20 years old. In addition, he has proven that mercury, even in very low-concentrations, can produce the very same pathological change seen in Alzheimer's disease (neurofibrillary tangles). [2]

It is interesting that the "expert panel" excluded studies on organic mercury, citing the difference in toxicokinetics as being the reason. They make the statement that they failed to find quantifiable amounts of inorganic mercury being converted to methylmercury in the body, which is strange since Charleston and Body reported the conversion of methylmercury to inorganic mercury within the brain's microglial cells.[3] This study was reported in the 1996 issue of Neurotoxicology, an issue that should have been included in the study timeframe.

What this means is that inorganic mercury can produce the very same damage in brain cells as methylmercury, which totally refutes their assertion. Likewise, other studies

have shown (in 1995) that a portion of the inorganic mercury in dental amalgam is converted into methylmercury in the tissues of the mouth.

Another tactic was to exclude all studies in which mercury body burdens were measured by means other than urine mercury levels, This excluded all studies using saliva, hair and nail clippings-all of which have shown to be reliable. By doing so, they were able to exclude a major smoking gun, that is, research showing that a baby's hair mercury level correlated with the number of dental amalgam fillings in the mother.

Imply things that are not supported by the studies

Throughout this report the authors imply that only chewing nicotine gum significantly increases mercury vapor release in the mouth. The purpose of this is to remove concern from those who chew ordinary gum. In fact, a number of studies have shown that blood levels and oral levels of mercury are substantially increased with chewing ordinary gum and even a piece of rubber tubing. Hot liquids or foods also have been proven to substantially raise oral mercury vapor levels as well as blood levels.

Another example is their insistence that there are insufficient studies to indicate a correlation between mercury exposure from dental amalgam and human disease, especially autoimmunity. While recognizing allergic hypersensitivity in some individual, they insist that it is rare. A recent study done just after their literature 2003 cut-off period, states that patients with certain autoimmune diseases such as lupus, multiple sclerosis, autoimmune thyroiditis and allergic disease "*often show increased lymphocyte stimulation by low doses of inorganic mercury in vitro*." [4]

In their study, they removed the amalgam from a group of 35 patients with autoimmune diseases and replaced them with composites. When examined six months later 71% had shown improvement in health, with the greatest improvement in those with multiple sclerosis. Their conclusion was stated as follows: " Mercury-containing amalgam may be an important risk factor for patients with autoimmune diseases".

A similarly glaring manipulation of reality occurred when the writers of the Executive Summary stated- "In total, these studies failed to support the hypothesis that Hg^0 (mercury vapor) exposure, at the levels released by dental amalgam interferes with human neuropsychological function or acts as an etiological factor for the neurodegenerative diseases-Parkinson's disease and Alzheimer's disease".

This is a total lie based on cleverly worded distortions of study conclusions and elimination of studies that show a strong correlation. In fact, a 1998 study by the prestigious Battelle Centers for Public Health Research found that mercury levels commonly seen among dental personnel with very low levels of mercury vapor exposure, demonstrated alterations in mood, motor function and cognition (thinking).[5] These, they emphasized, were symptoms that can be subtle and missed on conventional neuropsychological testing. These results have been confirmed by a number of other independent laboratories and reported in peer-reviewed journals.

As for the scientific connection to neurodegenerative disorders, a number of such studies abound in the literature. One of the most impressive lines of evidence is that pursued by Pendergrass and Haley in a 1997 study published in the journal Neurotoxicology. In the study they showed that exposure to mercury vapor, at concentrations known to be released by dental amalgams in people, increased mercury

concentrations in rat brains 11 to 47-fold higher than controls. At this level, the mercury produced the identical lesion seen in Alzheimer's disease (neurofibrillary tangles) by interfering with normal tubulin maintenance.

A second mechanism of producing neurodegenerative diseases is even more impressive, called excitotoxicity. Excitotoxicity, a mechanism by which excess glutamate accumulates outside the neuron, thereby leading to death of the cell by an excitation process, has been linked to mercury neurotoxicity as early as 1993.[6] More recent studies have confirmed this mechanism and clearly demonstrate that even in concentrations below that known to cause cell injury, mercury can paralyze the glutamate removal mechanism, leading to significant damage to synapses, dendrites and neurons themselves.

This glutamate removal mechanism is critical to brain protection. In addition, mercury in very low concentrations increases glutamate release, primarily by stimulating the brain's immune cell, the microglia. Chronic microglial activation, as seen with mercury exposure, has been solidly linked to all of the neurodegenerative diseases. At least two studies have shown that mercury increases the toxicity of glutamate. [7,8] Interestingly, excess glutamate can also produce the same neurofibrillary tangles seen with mercury exposure.

In essence, we have the mechanism by which these diseases are produced by mercury vapor and know that it can occur in concentrations commonly found in people having dental amalgam fillings. The reason even more people are not devastated by these diseases is that a number of nutritional and genetic factors offer substantial protection. For example, selenium has been shown to significantly lower brain mercury levels and reduce its toxicity.

Always pick the most vulnerable group and imply safety.

We see this tactic being used here and in the vaccine studies. In both cases, they used either studies on babies or pregnant animals as examples of implied safety. For example, they cite studies showing behavioral deficits in offspring of mothers exposed to high levels of mercury vapor, but then state that studies of the effects of lower levels do not exist, giving the impression that lower-levels of mercury are safe.

If this were true, then you would think that in a situation in which any damage produced in these exposed babies would be irreversible, you would opt for safety. But, not these experts. Instead, they conclude we should continue to expose these babies to a potentially devastating risk without any benefit.

As far back as 1972, careful studies demonstrated that mercury levels in the fetuses of pregnant rats exposed to elemental mercury vapor (Hg^0) were 10 to 40 times higher than animals exposed to equivalent doses of inorganic mercury (Hg 2+), meaning that elemental mercury easily passes through the placenta and into the baby.[9]

At least two studies have shown that elemental mercury accumulation within the fetus increases with time during gestation, so that the levels of mercury in the fetal organs are significantly higher toward the end of the pregnancy than during early pregnancy.[10, 11] In fact, it is now confirmed that the mercury levels in the brain reach even higher levels following birth, despite the ending of exposure to the mother's mercury. This is thought to be due to redistribution of the mercury from the fetus' liver to its brain.

This transfer of mercury from mother to child has been confirmed in at least two human studies as well; so it is not peculiar to animals.[12,13] Another case, involved a female surgeon exposed to 0.05mg/M^3 mercury vapor at work who birthed a baby having severe brain damage. The baby's blood mercury was shown to be elevated. This dose of mercury can be attained in a pregnant mother having a large number of dental amalgam fillings, chewing gum and exposed to hot food and drinks. (The Executive Summary considers a low dose of mercury half this value-0.025mg/M^3)

Studies by Dr. Boyd Haley and co-workers have shown that brushing amalgam-containing teeth can increase mercury vapor levels to 4.5 mg/M^3, substantially higher than the levels claimed by the Executive Summary. It is important to appreciate that mothers with amalgam fillings will be exposed to these levels of mercury vapor throughout their pregnancy and during breast-feeding. Mercury vapor easily enters breast milk.

A careful study done by Morgan and co-workers using pregnant rats exposed to mercury vapor found that because of the short distance to the brain, most of the mercury remained in the elemental, highly absorbable form, and easily enters the fetus' brain.[11] Yet, once in the brain it was converted by the enzyme catalase into the ionic form (Hg^{2+}), which binds to cellular components (sulfhydral units) making it very difficult to remove from the brain.

They also found that the concentration of the elemental mercury increased significantly in the uterus and placenta throughout the pregnancy. Because of the extreme toxicity of elemental mercury, this can interfere with normal functions of the placenta and uterus. The placenta is an extremely metabolic organ and critical to fetal health and development.

Of special importance is the observation that mercury in the brain tends to accumulate mostly in astrocytes and microglia, cells critical for brain immunity. A recent study lends even more importance to this observation. It was found that of 11 autopsied brains from individuals having autism all demonstrated diffuse, chronic activation of microglia and astrocytes; the exact effect of elevated brain mercury levels. [14] Ironically, chronic microglial activation has also been described in all of the neurodegenerative diseases as well as multiple sclerosis.

Always make false comparisons and ignore critical data

Under "conclusions" the authors of the Executive Summary admit that mercury vapor is released from dental amalgam restorations (fillings) and absorbed by the human body. To cover their main lie, that is that mercury amalgams are safe, they then note that their review of the studies found that 95% of the urine mercury levels were below WHO estimates of toxicity in1996. This was to convince the media and the public that these were safe levels.

What was ignored, among many things, was the fact that mercury is fat-soluble. This is important because the brain contains 60% fats and therefore accumulates mercury over time, so that even small daily doses gradually become larger concentrations. Even the distribution in the brain varies. Studies have shown that the hippocampus (critical for memory) is one of the areas preferentially accumulating mercury. The cerebellum and occipital lobes of the brain also accumulate mercury in higher concentrations.

The cerebellum is one of the areas most frequently damaged in autism. Mercury accumulates in higher levels in the nuclei (clusters of neurons in the cerebellum), leading to a loss of critical neurons.[15] There is also evidence that methylmercury enhances the toxicity of elemental mercury. There also appears to be a sex difference in mercury brain absorption, with females being more susceptible.

If all else fails, say that the blood-brain barrier protects the brain from mercury

Protection of the brain by the blood-brain barrier (BBB) is the favorite claim for the unscrupulous to fall back on. This was used by the defenders of MSG safety until I proved that tens of millions of people had conditions that impaired the function of their BBB. including hypertension, diabetes, head injury, strokes, certain drugs, pesticides, herbicides, MSG itself, immune overstimulation (vaccines and autoimmune diseases), brain tumors, Alzheimer's disease, Parkinson's disease and aging itself. In addition, critical parts of the brain have no BBB protection (circumventricular organs).

Elemental mercury can enter the brain not only under these conditions, but also has a special mechanism to sneak into the brain. Mercury vapor, when absorbed by the lining of the mouth and nasal cavities, is taken up by the terminal filaments of the trigeminal nerves and olfactory nerves respectively. It then travels along the nerve axons to the olfactory bulb underneath the brain and trigeminal ganglion.[16] Pathways connect this bulb to several critical areas of the brain, including the prefrontal cortex, amygdala and entorhinal area. Mercury has been shown to travel into the brain when absorbed through the nasal passages.

In fact, a number of metals, chemicals, neurotransmitters, toxins and even ultrafine particles have been shown to travel by way of the olfactory nerves into the brain, leading to injury to critical areas of the brain. Dental amalgam fillings are constantly releasing mercury vapor and 80% of this elemental mercury is absorbed into the tissues of the mouth. As stated, chewing and drinking hot foods and liquids greatly increase the release of mercury vapor. Even this present study recognized that you have your amalgam filling with you 24 hours a day, which can make the danger even greater than some cases of industrial exposure.

WebMD should be called QuackMD.

So-called "orthodox medicine" likes to imply that traditional medical practice is based on hard scientific evidence, which they tout as "evidence-based medicine" and that everything outside their control is un-scientific. Several studies have shown that 80% or more of standard medical practice has no scientific basis whatsoever.

WebMD posted on their website their take on this study, implying that it was definitive and based on hard science by the best experts in the world. Ironically, they have Cynthia Trajtenberg, a professor of restorative dentistry and dental biomaterials at the University of Texas Dental Branch at Houston, add her idiotic commentary.

She resorts to the ADA's standby nonsense, which they used to brainwash their dental members over half a century ago. It goes like this: You can think of it like chlorine, which alone is a serious toxin, but when bound with sodium it becomes harmless salt.

She goes on to say, " It's the same with mercury. Mercury in dental fillings is combined with silver and copper, and is transformed into a stable metal material that is not easily released into the oral cavity. Therefore it is not harmful."

This laughable nonsense is not even endorsed by the report, which clearly says that the mercury vapor easily escapes the filling and is absorbed into the blood by way of the tissues of the mouth and lungs. She obviously slept through her chemistry courses. Sodium chloride is a compound, bound by strong ionic bonds. Amalgam is a mixture of metals not in an ionic state. Metallic mercury has a very low evaporation temperature and readily turns into a vapor. This is "hard science".

Why would WebMD, which professes to be "evidence-based", print such obvious idiocy easily exposed by even a freshmen in high school? Could it be that they are prejudiced against the idea of amalgam toxicity? Or perhaps, could it be that the editors have friends in the dental community who asked for their help against "charlatans" in alternative medicine? It is obvious that little in the way of "hard science" is in evidence.

Conclusions

This is just another piece of "junk science" to come out of the government/ industry coalition. An avalanche of such phony studies have descended from some prestigious institutions such as the Institute of Medicine, Health and Human Services, CDC, Life Sciences Research Office, FDA, etc.

By cleverly restricting the information (scientific research), excluding real experts in the area in question and by forcefully implying clear cut conclusions when none exist, they deceive the media and public. In all of these studies they provide the media with an Executive Summary, which often has conclusions that are opposite what was shown in the body of the report, knowing that the media are often too lazy or not sophisticated enough to understand the subtleties of the science being discussed.

As a result, the public is assured that dental amalgam is perfectly safe and that the question has been carefully examined by some of the best scientific minds in the world in every way the issue could be examined. In essence, the issue is closed. How many times do we have to face a medical disaster resulting from this errant thinking before we learn?

While I have analyzed only the Executive Summary and not the body of the report, this Executive Summary is what will reach the public. The LSRO is charging $75 for the report itself if you include the references. This is outrageous for a study funded by taxpayer monies, printed on a computer. But then they hope none of their critics will ever read the report.

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